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Mon Mar 10 09:10:46 2003
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GenCore version 5.1.4_p5_4578
Copyright (c) 1993 - 2003 Compugen Ltd.

OM nucleic - nucleic Bearch, using sw model

Run on: March 10, 2003, 04:39:54; Search time 171.5 Seconds (without alignments)
302.017 Million cell updates/sec
```

| Title: US-09 Perfect score: 23 | US-09-975-842-2 | |
|--------------------------------|--|--|
| Sequence: | 1 ggn/thccnggnttymgnrtngg 23 | |
| Scoring table: | IDENTITY_NUC Gapoxt 1.0 | |
| Searched: | 21852 9 seqs, 1125999159 residues | |
| Total number of | Total number of hit: satisfying chosen parameters: 4370478 | |
| Minimum DR sea length, O | length; D | |

| | Post-processing: Minimum | Minimum DB seq le Maximum DB seq le |
|--------------------------------------|--------------------------|--|
| Maxinum Listing | Miniflum | length: 0 length: 2 |
| n Match 100% y first 45 summaries | n Match 0% | 0 2000000000 |

| N_Geneseq_101002:* 1: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1980.DAT 2: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT 3: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT 4: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1983.DAT 5: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1985.DAT 6: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1985.DAT 7: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT 8: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT 10: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1989.DAT 10: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1989.DAT 11: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1990.DAT 12: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1991.DAT 13: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1991.DAT 14: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1993.DAT 15: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1993.DAT 16: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1993.DAT 17: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1993.DAT 18: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1995.DAT 19: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1995.DAT 19: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1995.DAT 19: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 20: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 21: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 22: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 23: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 24: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 25: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 26: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 27: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 28: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 29: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 20: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT 20: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA20001A.DAT 21: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA20001A.DAT 22: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA20001A.DAT 23: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA20002.DAT 24: /SIDS2/gcgdata/geneseq/geneseq-embl/NA20001A.DAT 25: /SIDS2/gcgdata/geneseq/geneseq-embl/NA20001A.DAT 26: /SIDS2/ | | | Database : |
|--|--|--|--|
| HPPHHHHHHHHHHHHHH | 21: /SIDSZ/gcydata/genesed/geneseqn-embl/WA199.DAT:* 21: /SIDSZ/gcydata/genesed/geneseqn-embl/WA2000.DAT:* 22: /SIDSZ/gcydata/genesed/geneseqn-embl/WA2001A.DAT:* 23: /SIDSZ/gcydata/genesed/geneseqn-embl/WA2001B.DAT:* 24: /SIDSZ/gcydata/genesed/geneseqn-embl/WA2002.DAT:* | /SIDS2/gcgdata/genesed/geneseqn-embl /SIDS2/gcgdata/genesed/geneseqn-embl /SIDS2/gcgdata/genesed/geneseqn-embl /SIDS2/gcgdata/genesed/geneseqn-embl /SIDS2/gcgdata/genesed/geneseqn-embl /SIDS2/gcgdata/genesed/geneseqn-embl /SIDS2/gcgdata/genesed/geneseqn-embl /SIDS2/gcgdata/genesed/geneseqn-embl | geneseq/geneseqn-embl/NA1980 geneseq/geneseqn-embl/NA1981 geneseq/geneseqn-embl/NA1982 |

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| 1 15.4 C 2 15.4 1 15.4 1 15.4 6 15.4 9 15.4 9 15.4 | Result |
|---|-------------------------------|
| 67.3 67.3 67.3 67.3 67.3 67.3 67.3 1 | % Query Match Length DB |
| 23 23 248 261 368 398 1080 1080 1096 | gth DI |
| 24 24 24 24 24 24 24 24 24 24 24 24 24 2 | 3 ID |
| AAV30328 AAS19698 ABQ65439 AAV00220 AAV00219 AAT73628 AAT77631 AAT77631 | SUMMARIES |
| ACC synthase gene PCR primer #1 used Arabidopsis thalia 11-aminocyclopropan 1-aminocyclopropan Broccoli ACC synth Ananas comosus ACC Mangifera indica A Carica papaya ACC | Description |

| | | | | | | | a | | | | | | | | | | | c | | | | | | | | | | | | | | | | | |
|----------|----------|----------|----------|----------|--------------------|--------------------|--------------------|----------|----------|------------|----------|--------------------|----------|----------|--------------------|----------|--------------------|----------|----------|-----------|----------|----------|--------|----------|----------|------|----------|----------|----------|--------------------|----------|----------|---------|----------|-------------------|
| 45 | 44 | 43 | 42 | 4 | 40 | . w | 38 | 37 | 36 | ω | 34 | 33 | 32 | ω L | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 |
| 15.4 | 15.4 | 15.4 | ı, | . 5 | . 5 | .51 | .5 | 5 | 5 | 15.4 | 15.4 | 15.4 | .15.4 | 15.4 | 15.4 | | • | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 |
| 67.0 | ,~ | | `.` | `.` | `.` | . 7 | . 7 | | .7 | .7 | 67.0 | .7 | .7 | .7 | . 7 | .7 | .7 | .7 | .7 | .7 | .7 | .7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 7587 | 7587 | 7587 | 7244 | 7244 | 7244 | 7241 | 6910 | 5613 | 3438 | 2230 | 2230 | 2230 | 2088 | 1923 | 1888 | 1878 | 1868 | 1828 | 1818 | 1818 | 1800 | 1793 | 1783 | 1781 | 1780 | 1775 | 1703 | 1703 | 1703 | 1703 | 1482 | 1384 | 1170 | 1113 | 1104 |
| 22 | 19 | 12 | 22 | 22 | 19 | 12 | 23 | 15 | 20 | 22 | 22 | 19 | 19 | 21 | 19 | 19 | 18 | 23 | 22 | 12 | 19 | 12 | 12 | 12 | 12 | 12 | 22 | 22 | 19 | 12 | 13 | 17 | 18 | 18 | 8 |
| AAD04543 | AAV15703 | AAQ15133 | AAF23622 | AAD04545 | AAV15705 | AAQ15140 | ABL09570 | AAQ63241 | AAX35671 | AAF23621 | AAD04544 | AAV15704 | AAV20947 | AAZ94267 | AAV31482 | AAV30326 | AAT73502 | ABL09571 | AAD04546 | AAQ15135 | AAV09713 | AAQ15139 | 13 | AAQ15137 | AAQ15138 | 513 | AAF23618 | AAD04541 | AAV15701 | AAQ15131 | AAQ25896 | AAT33136 | Ó | 7263 | AAT72629 |
| CP- | | _ | | | Tomato ACC synthas | Genomic clone LE-A | Drosophila melanoq | 0 | o - | ACC syntha | a | Tomato ACC synthas | e-fru | ean 1 | Papaya ACC synthas | | Poplar 1-aminocycl | - | 1-amin | ne ptACC2 | ynthase | ptACC6 | ptACC3 | ptACC4 | ptACC5 | 2001 | | 1 -ar | ni ACC | Clone pACC1 encodi | etas | synt | se GAC- | era indi | Carica papava ACC |

ALIGNMENTS

| 五五 五五 | , Tj | 'n | E.I. | וַדיי וַ | Į. | Ή | μĵ | μĴ | μĵ | ΉJ | 12) | × | 0 | 0 | 0 | × | ~ | * | × | × | D | × | D | × | AC | < ⊢ | ۷. | מי |
|--------------------|----------|---------------|--------------------------|-----------------|----|----------|---------------|--------|----------|---------------|---------------------|---|---|---------|--------------|---|---|---|---|---|-----------------------------|---|---------------|---|--------------|-----------------------|--------|----------|
| modified_base | | modified_base | 4. | r modified_base | | | modified_base | H | | modified_base | Key | | | | s Synthetic. | | | | | | ACC | | 28-SEP-1998 | | AC AAV30328; | AAV SUS ZB | V30328 | RESULT 1 |
| /mod_base= i 18 | /*tag= d | | /*tag= c /mod_base= i | . 9 | S | /*tag= b | 6 | S S | /*taq= a | ω . | Location/Qualifiers | | | rtorum. | | | | ethylene; transgenic plant; wilting; geranium; rose; PCR; primer; | aminocyclopropane-1-carboxylate synthase; | | synthase gene PCR primer I. | | (first entry) | | | Standard; DNA; 23 BP. | | |

/*tag=

```
RESULT 2
AAS19698
ID AAS1
XX AAS1
XX AAS1
XX O9-;
XX O9-;
XX Ger
XX Ger
XX Ger
XX Ger
XX Ger
XX Ger
XX O9P;
XX O0
XX D1:
XX O1
XX O1
PF O1
XX O1
PR O1
XX O1
PR O1
XX O1
                                                                                                                                                                                                                                                                                                                                                                                               Db
                                                                                                                                                                                                                                                                                                                            QУ
                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                              primer I and primer II (see AAV30329) were used in PCR amplification of develop PCR probes for the isolation of geranium and rose 1-aminocycloproane-1-carboxylate synthase (ACC synthase) cDNA clones (see AAV30324-26 and AAV30330). The invention relates to use of antisense fragments of these genes to control ACC synthase expression in plants. By reducing the amount of ACC synthase produced in plant cells, the rate of ACC conversion to ethylane can be decreased. This can be used to prolong the shelf-life of cut flowers and to reduce leaf yellowing and petal abscission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ranu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated ACC synthase genes - are obtained from geranium and rose, used to develop products for producing plants with reduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9814465-A1
                                                                                                                                      gPHSacc49;
                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                    during shipping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ethylene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1998-260994/23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (COLS ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-SEP-1997;
            09-MAY-2000;
12-OCT-2000;
                                             09-MAY-2001;
                                                                    15-NOV-2001
                                                                                         WO200185754-A1
                                                                                                               Pelargonium x hortorum
                                                                                                                                                            Geranium; 1-aminocyclopropane-1-carboxylate synthase
                                                                                                                                                                                PCR primer
                                                                                                                                                                                                      09-APR-2002
                                                                                                                                                                                                                             AAS19698;
                                                                                                                                                                                                                                                   AAS19698
                                                                                                                                                                                                                                                                                                         ы
                                                                                                                                                                                                                                                                                                                              -
                                                                                                                                      synthase; plant
Sacc49; ss.
                                                                                                                                                                                                                                                                                                         GGNYTNCCNGGNTTYMGNRTNGG
                                                                                                                                                                                                                                                                                                                             GGNYTNCCNGGNTTYMGNRTNGG
                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 levels, for increasing shelf-life
                                                                                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 36;
                                                                                                                                                                                                                                                                                                                                                                                               23 BP; 0 A;
                                                                                                                                                                                 #1 used
                                                                                                                                                                                                                                                                                                                                                     larity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COLORADO STATE RES FOUND
            2000US-203021P.
2000US-239782P.
                                                                                                                                                                                                      (first entry)
                                             2001WO-US15023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96US-0724194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97WO-US17644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mod_base=
21
                                                                                                                                                                                                                                                                                                                                                                                                                      and storage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= f
/mod_base=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           77pp; English
                                                                                                                                                                                                                                                   DNA;
                                                                                                                                                                                 ç
                                                                                                                                                transcription
                                                                                                                                                                                                                                                                                                                                                                                               2 C; 7 G; 4 T;
                                                                                                                                                                                                                                                                                                                                                                           67.0%;
                                                                                                                                                                                amplify
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   m
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                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                    ВP
                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                               Score 15.4;
Pred. No. 1
                                                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                  DNA fragment of
                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                regulation; plant;
                                                                                                                                                                                                                                                                                                                                                                                                 10 other;
                                                                                                                                                                                                                                                                                                                                                     .1e+02;
s 0;
                                                                                                                                                                                                                                                                                                                                                                           DB
                                                                                                                                                                                                                                                                                                                                                                            19;
                                                                                                                                                                                 geranium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in PCR amplifications
                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                   gene
PCR;
                                                                                                                                                                                   PHSacc
                                                                                                                                                                                                                                                                                                                                                                            23;
                                                                                                                                                   primer;
                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                  genes
                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the
                                                                                                                                                                                                                                                                                                                                                      0,
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RESULT 3
ABQ65439/c
ID ABQ65439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                         Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention relates to the isolation of promoter DNA from geranium (Pelargonium x hortorum) genomic clone PHSacc49 (gPHSacc49). This promoter represents the ACC (1-aminocyclopropane-1-carboxylate) synthase gene promoter. The promoter is useful to regulate the transcription level of a coding sequence in geranium and other plants. The present sequence represents a PCR primer used to amplify a DNA fragment of geranium PHSacc genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New
of g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                      (MATH/)
(LEDF/)
(WOES/)
                                                                                                                                                                                                                                                                                                                                        ABQ65439;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (COLS ) UNIV COLORADO STATE.
(TAGA-) TAGAWA GREENHOUSES I
                                                                                                                                                                                                                                                               stress; metabolic pathway; biosynthetic insecticide; antibiotic; ds.
                                                                                                                                                                                                                                                                                 Arabidopsis thaliana; thale cress;
                                                                                                                                                                                                                                                                                                    Arabidopsis
                                                                                                                                                                                                                                                                                                                      21-AUG-2002
                                    (HAAS/)
                                                                                                                                                                                                                            US2002059663-A1
                                                                                                                                                                                                                                             Arabidopsis thaliana
                 (KRIC/)
                                                                                 (RAME/)
(PAGE/)
                                                                                                     (RAIN/)
                                                                                                                               (ANYY/)
                                                                                                                                                                     27-JAN-2000; 2000US-178506P
                                                                                                                                                                                      26-JAN-2001; 2001US-0770149
                                                                                                                                                                                                         16-MAY-2002
                                                                                                                        (PRIC/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      geranium,
                                                                                                                                                                                                                                                                                                                                                                                                        \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGNYTNCCNGGNTTYMGNRTNGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               promoter
                                                                                                                                                                                                                                                                                                                                                                                                         GGNYTNCCNGGNTTYMGNRTNGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002-075241/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
23; Conserv
SLATER T.
DAVIS K R.
ALLEN K.
                                    LEDFORD B L.
WOESSNER J P.
HAAS W D.
GARCIA C A.
                                                                        PAGE A.
MATHEW A V.
                                                                                                      υY
                                                                                                                                HAMILTON C M
                                                                                                                                          ΑN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oter from the 1-aminocyclopropane-1-carboxylase synthase gene
ium, useful to regulate level of transcription of coding
in gerinium and other plants
                                                                                          RAMEAKA J G
                                                                                                              RAINES T M.
                                                                                                                        PRICE J L.
                                                                                                                                                  GORLACH J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23
                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                          67.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                   thaliana polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; 38pp;
                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; 2 C; 7 G; 4 T; 10 other;
                                                                                                                                                                                                                                                                                                                                                            DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                            748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INC
                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                            ВΡ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 15.4;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                         23
                                                                                                                                                                                                                                                                                                                                                                                                                           23
                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                       plant; transgenic; GMO; (
hetic pathway; nutrition;
                                                                                                                                                                                                                                                                                                     SEQ
                                                                                                                                                                                                                                                                                                      IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 24;
1.1e+02;
es 0;
                                                                                                                                                                                                                                                                                                      Ö
                                                                                                                                                                                                                                                                                                       16
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                          fungicide;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

0;

(DAVI/)

```
Claim 1; SEQ II 10 16; 40pp + Sequence Listing; English.
                                                                                                                                               New nucleic acid that hybridizes to Arabidopsis thaliana sequences, useful e.g. for preparing transgenic plants with increased resistance or altered metabólism
                                                                                                                                                                                                 Gorlach J, An Y, Ham:
Rameaka JG, Puge A, N
Garcia CA, Kricker M,
Hurban P;
                                                                                                                                                                                                                                               (HOFF/)
(HURB/)
                                                                                                                                                                                                                                               HURBAN P
                                                                                                                                                                                                         Hamilton CM, Price JL, Raines TM,
A, Mathew AV, Ledford BL, Woessner
r M, Slater T, Davis KR, Allen K,
                                                                                                                                                                                                                    Yu Y;
JP,
                                                                                                                                                                                                           Hoffman
                                                                                                                                                                                                                 Haas WD;
```

z

The invention relates to nucleic acids (I) that hybridise under stringent conditions to any of 999 sequences (ABQ65422-ABQ66422) or their fragments. (I) are used to express the corresponding polypeptides (II) or to produce genetically modified plant cells or transgenic plants, which metabolic/biosynthetic pathways (for production of commercial, nutritional or medicinal products), or generally any trait of interest, or can be used to screen for biologically active agents (e.g. fungicides, nosecticides and antibiotics).

Note: The sequence data for this patent did not form part of the printed specification, by twas obtained in electronic format directly from the USFTO at sequence.html?DocID=999909770149.

```
Вþ
                ρy
                                    Matches
                                            Query Match
Best Local
                                                                     Sequence 748 BF; 209 A; 202 C; 120 G; 213 T; 4 other;
  617
              1 GGNYTNCCNGGNTTYMGNRTNGG 23
GGTCTTCCTGGTTTCCGCGTGGG 595
                                  l Similarity 56.
                                         67.0%;
56.5%;
                                  4;
                                  Score 15.4; D
Pred. No. 1.5e
4; Mismatches
                              1.5e+02;
6;
                                  Indels
                                                 Length 748;
                                 0;
                                Gaps
```

0;

```
l-aminocyclopropane-1-carboxylic acid; ACC synthase; p flowering; inhibition; regulation; development; fruit;
                                                              1-aminocyclopropane-1-carboxylic acid synthase gene acacc3.
                                                                                                                  08-JUN-1998
                                                                                                                                                            AAV00220;
                                                                                                                                                                                                AAV00220 standard;
                                                                                                          (first entry)
                                                                                                                                                                                                   DNA;
                                                                                                                                                                                                   961
```

```
RESULT 4
AAVO0220
ID AAVO
ACC AAVC
ACC ACC
ACC
                                                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ananas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   comosus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= a
/product= "acacc3"
/prote= "no stop cod
1..101
/*tag= b
                                                                                                                                                                      /3umber= 1
132.193
/*tag= c
/pumber= 1
194.961
/*tag= d
/pumber= 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
1..961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       codon given; contains
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Ananas comosus.

1-aminocyclopropane-1-carboxylic acid; ACC synthase; pineapple; flowering; inhibition; regulation; development; fruit; ss. 1-aminocyclopropane-1-carboxylic acid synthase gene acacc2

/*Lag= a
/product= "acacc2"
/transl_except= (pos:967..968,aa:Val)
/note= "no stop codon given"

Location/Qualifiers

06-NOV-1997 AU9719963-A.

01-MAY-1996; 01-MAY-1997; 06-NOV-1997

96AU-0009582 97AU-0019963

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The present sequence represents the nucleotide sequence encoding a 1-aminocyclopropane-1-carboxylic acid (ACC) synthase enzyme of pineapple. The present invention describes a transgenic variety of pineapple in which initiation of flowering is inhibited, the variety of pineapple in which initiation of flowering is inhibited, the variety comprising a nucleotide sequence encoding an ACC synthase enzyme where the nucleotide sequence is operably linked, in the sense or antisense orientation, to one or more regulatory nucleotide sequences. The ACC synthase gene can be used to regulator pineapple plant development, particularly for inhibiting initiation of flowering. Such plants can then be induced to flower in a narrow spectrum of time which would thereby decrease the spread of fruit maturity within a crop.
Sequence 961 BP; 235 A; 246 C; 247 G; 233 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                             WPI; 199
P-PSDB;
                                                                                                                                                                                                                                                              Claim 2; Fig 2; 37pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GOLD-)
(QUEE-)
                                                                                                                                                                                                                                                                                                     New isolated ACC synthase genes from pineapples - used to generate transgenic pineapples in which the natural initiation of flowering is inhibited
                                                                                                                                                                                                                                                                                                                                                                                                                                    Botella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                1998-009279/02.
DB; AAW37445.
                                                                                                                                                                                                                                                                                                                                                                                                                                    J, Sanewski G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GOLDEN CIRCLE LTD
STATE QUEENSLAND.
UNIV QUEENSLAND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96AU-0009582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97AU-0019963
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Query Match Best Local S 1 Similarity
13; Conserv Conservative 67.0%; 56.5%; 4. Score 15.4; DB 19; Pred. No. 1.5e+02; 4; Mismatches 6; Pred. No. 1.5 4; Mismatches Length 961; 0; Gaps 0

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RESGUT 5
ANAVO
ANAVO
XX ANAVO
XX O8-J
XX 1-am
XX 1-am
XX 1-am
XX FT CDS

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV00219;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV00219 standard; DNA; 968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGNYTNCCNGGNTTYMGNRTNGG 23
|| :| || || || :| :| ||
567 GGGCTACCAGGCTTTCGCGTCGG 589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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B

δÃ

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RESULT 6
AAT33139
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 Matches
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present sequence represents the nucleotide sequence encoding a 1-aminocyclopropane-1-carboxylic acid (ACC) synthase enzyme of pineapple. The present invention describes a transgenic variety of pineapple in which initiation of flowering is inhibited, the variety comprising a nucleotide sequence encoding an ACC synthase enzyme where cortentation, to one or more regulatory nucleotide sequences. The ACC synthase gene can be used to regulate pineapple plant development, particularly for inhibiting initiation of flowering. Such plants can then be induced to flower in a narrow spectrum of time which would thereby decrease the spread of fruit maturity within a crop.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GOLD-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New isolated ACC synthase genes from pineapples - used to generate transgenic pineapples in which the natural initiation of flowering is inhibited
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P-PSDB;
                                                                                                                                                                                                                                                          ACC synthase; 1-aminocyclopropyl-1-carboxylic acid synthase; ethylene; shelf-life; Cucumis melo; melon; transgenic plant;
                                                                                                                                                                                                                                                                                           Broccoli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Botella J,
                                                                                                                                                                                                                          Brassica oleracea
                                                                                                                                                                                                                                                 antisense;
                                                                                                                                                                                                                                                                                                                   07-DEC-1996
                                                                                                                                                                                                                                                                                                                                        AAT33139;
                                                                                                                                                                                                                                                                                                                                                              AAT33139 standard; cDNA; 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                            07-JUN-1995;
                                                                                         WO9621027-A1
                                                                                                                                   primer_bind
                                                                                                                                                                    primer_bind
                                                                                                                                                                                           mat_peptide
(ASGR-) ASGROW
                       30-DEC-1994;
                                                                                                                                                                                                                                                                                                                                                                                                             571 GGCCTCCCCGGTTTTAGGGTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                           _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-009279/02.
                                                                                                                                                                                                                                                                                                                                                                                                                                          GGNYTNCCNGGNTTYMGNRTNGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GOLDEN CIRCLE LTD STATE QUEENSLAND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW37444.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UNIV QUEENSLAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           968 BP; 241 A; 235 C; 294 G; 198 T; 0 other;
                                                                                                                                                                                                                                                 broccoli;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sanewski G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲.
                                                                                                                                                                                                                                                                                           synthase cDNA clone TA13.
                                                                                                                                                                                                                                                                                                                 (first entry)
 SEED CO
                       94US-0366992
                                             95WO-US07271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37pp;
                                                                                                                                      /note= "primer RMM494"
975..993
                                                                                                                                                                    complement (1..14)
                                                                                                                                                                              /*tag=
                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                         /*tag=
                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67.0%;
56.5%;
                                                                                                                                                                                                                                                   SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   English
                                                                                                              "primer RMM491'
                                                                                                                         ်ဂ
                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4;
                                                                                                                                                                                                                                                                                                                                                                                                                      593
                                                                                                                                                                                                                                                                                                                                                                                                                                           23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 15.4;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 968;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
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                                                                                                                                                                                                                                                                                                                                                                                                                                           AAT72628
                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brassica oleracea cDNA clone TA13 (AAT33137) codes for 1-aminocyclopropyl-1-carboxylic acid synthase (ACC-synthase) (AAR98599), an enzyme involved in ethylene biosynthesis. It was obtd. by PCR amplification (see also AAT33140) of broccoli floret cDNA. The PCR product was cloned into pCR11 to obtain clone TA31. CDNA or genomic DNA (see also AAT33136) can be inserted, in sense or antisense orientation, into an expression cassette and then transferred to a binary vector suitable for Agrobacterium-mediated plant transformation. The constructs permit control of the level of ACC synthase in a transgenic plant (esp. B. oleracea or Cucumis melo) and hence a control of maturation, ageing and shelf-life.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA encoding 1-amino:cyclo:propyl-1-carboxylic acid synthase of Brassica oleracea - used to regulate ethylene-dependent processes
                                                                                                                                                                                                                                                                                          ACC synthase; S-adenosyl-L-methionine methylthioadenosine lyase; acaccl; ethylene biosynthesis; transgenic plant; senescence; antisense expression system; plant development; fruit ripening; EC 4.4.1.14; pineapple; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Boeshore ML,
                                                                                                                                                                                                                                                                                                                                                         Ananas
                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT72628 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                     Ananas
                                                                                                                                                                                                                                                                                                                                                                                                         AAT72628;
                                              02-MAY-1996;
20-SEP-1995;
                                                                                                                                                                                                                                                                                                                                                                                 27-JAN-1998
                       (UYQU ) UNIV
                                                                                   20-SEP-1996;
                                                                                                             27-MAR-1997
                                                                                                                                     WO9711166-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      plants, esp. to improve shelf life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGNYTNCCNGGNTTYMGNRTNGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTCTTCCCGGTTTTCGAGTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3; Fig6A-C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
13; Conserv
                                                                                                                                                                                                                                                                                                                                                         comosus
                                                                                                                                                                                                                                                                       comosus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAR98599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          993 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                        QUEENSLAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Carney
                                                                                                                                                                                                                                                                                                                                                         ACC
                                               96AU-0009603.
95AU-0005559
                                                                                    96WO-AU00591
                                                                                                                                                        /Product= acaccl
/product= acaccl
/EC_number= 4.4.1.14
/note= "Sequence represents 75% of the coding
/note= "Sequence and does not contain the star
                                                                                                                                                                                                                                              location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          269 A; 233 C; 253 G;
                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50pp; English.
                                                                                                                                                                                                                                                                                                                                                         synthase,
                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA; 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67.0%;
56.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ΚJ,
                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Deng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 15.4; DB 1/; Pred. No. 1.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23
                                                                                                                                                                                                                                                                                                                                                           acacc1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RZ,
                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Reynolds JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            238 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ruttencutter GE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                          the start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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Botella

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
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Best Local
                                                                                  02-MAY-1996;
20-SEP-1995;
                                                           (UYQU)
                                                                                                                    20-SEP-1996;
                                                                                                                                              27-MAR-1997.
                                                                                                                                                                     WO9711166-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence represents a novel gene, acacci, which encodes an ACC synthase. The analyme ACC synthase is involved in the pathway for ethylene biosynthesis and the rate of endogenous expression of ACC synthase is considered to limit substantially the rate of ethylene production. Endogenous ethylene is often deleterious to crops, especially if some form of mechan.chl wounding has occurred and diminishes their post harvest quality and storage life. Novel ACC synthase genes expressed in transgenic plants using either sense or antisense expression system may be used to control the regulation of plant development, in particular fruit ripening, reducing senescence and thus improving
                                                                                                                                                                                                                                                                                                                         ACC synthase; S-denosyl-L-methionine methylthioadenosine lyase; miaccl; ethylene biosynthasis; transgenic plant; senescence; antisense expression system; plant development; fruit ripening; EC 4.4.1.14; mango; multigene family; ss.
                                                                                                                                                                                                                                                                                                     Mangifera
                                                                                                                                                                                                                                                                                                                                                                                      Mangifera indica ACC synthase miaccl gene.
                                                                                                                                                                                                                                                                                                                                                                                                               27-JAN-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAT72631 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pineapple,
therapy to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGNYTNCCNCIGITTYMGNRTNGG 23
|| :| || || || :| :| ||
691 GGTCTCCCCCGATTCCGAGTCGG 71:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 56.5 es 13; Conservative
 1997-202875/18
DB; AAW18289.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1997-202875/18
                                    JR;
                                                            UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 life.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAW18236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1080 BP; 264 A; 294 C; 299 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fig
                                                                                                                                                                                                                                                                                                       indica:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   paply3 and mango ACC synthase genes - used produce fruits with reduced senescence
                                                           QUEENSLAND.
                                                                                 36AU-0009603
35AU-0005559
                                                                                                                    36WO-AU00591
                                                                                                                                                                           /*tag= a
/product= miacc1
/product= 4.4.1.1.4
/EC_number= 4.4.1.1.4
/note= "Sequence represents 75% of the coding
sequence and does not contain the start
...
or stop codons."
                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                  ..1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67.0%;
56.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 1.5
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 15.4;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       223 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1080;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     involved in the pathway for ethylene biosynthesis and the rate of endogenous expression of ACC synthase is considered to limit substantially the rate of expression of ACC synthase is considered to limit substantially the rate of ethylene production. Endogenous ethylene is often deleterious to crops, especially if some form of mechanical wounding has occurred and diminishes their post harvest quality and storage life. Novel ACC synthase genes expressed in transgenic plants the regulation of plant development, in particular fruit ripening, reducing senescence and thus improving storage life.

Sequence 1096 BP; 302 A: 227 ~ ~-
 Pineapple,
therapy to
                                 WPI; 1997-202875/18
P-PSDB; AAW18288.
                                                                                                                                                                                                                                                                                                                                 ACC synthase; S-adenosyl-L-methionine methylthioadenosine lyase; capacc2; ethylene biosynthesis; transgenic plant; senescence; antisense expressionetem; plant development; fruit ripening; EC 4.4.1.14; papaya; multigene family; ss.
                                                                                                              02-MAY-1996;
20-SEP-1995;
                                                                                        (UYQU ) UNIV
                                                                                                                                              20-SEP-1996;
                                                                                                                                                                                          WO9711166-A1
                                                                                                                                                                                                                                                                                                                  Carica
                                                                                                                                                                                                                                                                                                                                                                                                Carica
                                                                                                                                                                                                                                                                                                                                                                                                                     27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                           AAT72630;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAT72630 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pineapple,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGNYTNCCNGGNTTYMGNRTNGG 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCCTCCCTGGCTTTAGGGTTGG
                                                                                                                                                                                                                                                                                                                  papaya.
                                                                                                                                                                                                                                                                                                                                                                                             papaya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
papaya and mango ACC synthase genes - produce fruits with reduced senescence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          papaya and mango ACC synthase genes - used produce fruits with reduced senescence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                        QUEENSLAND
                                                                                                                                                                                                                                                                                                                                                                                             ACC synthase
                                                                                                             96AU-0009603
95AU-0005559
                                                                                                                                                                                     /*tag= a /4.1.14
/EC_number= 4.4.1.14
/product= capacc2
/note= "Sequence represents 75% of the cod sequence and does not contain the or stop codons."
                                                                                                                                             96WO-AU00591
                                                                                                                                                                                                                                                                                Location/Qualifiers
1..1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67.0%;
56.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1098
                                                                                                                                                                                                                                                                                                                                                                                             capacc2 gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      710
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 15.4; DB
Pred. No. 1.6e+(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 18;
.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6,
          used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
          in
          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
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0;

senescence

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RESULT 10
AAT72629
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This sequence represents a novel gene, capacc2, which is a member of the ACC synthase multigene family found in papaya. The enzyme ACC synthase is involved in the pathway for ethylene biosynthesis and the rate of endogenous expression of ACC synthase is considered to limit substantially the rate of ethylene production. Endogenous ethylene is often deleterious to crops, especially if some form of mechanical wounding has occurred and diminishes their post harvest quality and storage life. Novel ACC synthase genes expressed in transgenic plants using either sense or antisense expression system may be used to control the regulation of plant development, in particular fruit ripening, reducing senescence and thus improving storage life.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 3;
                                                                                                                                                                                                                                                                                                                                                                                                                            antisense expression EC 4.4.1.14; papaya;
                                                                                                                                                                                                                                                                                                                                                                                                                             ACC synthase; S-adenosyl-L-methionine methylthioadenosine lyase; capaccl; ethylene biosynthesis; transgenic plant; senescence; antisense expression system; plant development; fruit ripening; EC 4.4.1.14; papaya; multigene family; ss.
                                                                                                                                                                                                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAT72629 standard; DNA; 1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                      Carica papaya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Carica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAT72629;
                                 Pineapple, papaya and mango ACC synthase genes - used therapy to produce fruits with reduced senescence
                                                                          P-PSDB;
                                                                                                                Botella
                                                                                                                                                                 02-MAY-1996;
20-SEP-1995;
                                                                                                                                                                                                        20-SEP-1996;
                                                                                                                                                                                                                                  27-MAR-1997
                                                                                                                                                                                                                                                          WO9711166-A1
          Claim
                                                                                                                                      (UYQU ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       688 GGTCTCCCCGGTTTCCGGGTAGG 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGNYTNCCNGGNTTYMGNRTNGG 23
                                                                         1997-202875/18.
DB; AAW18287.
          2; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             papaya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1098 BP; 276 A; 275 C; 299 G; 248 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
          2; 46pp; English
                                                                                                                                        QUEENSLAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46pp;
                                                                                                                                                                  95AU-0005559
                                                                                                                                                                                96AU-0009603
                                                                                                                                                                                                         96WO-AU00591
                                                                                                                                                                                                                                                                                                            /EC_number= 4.4.1.14
/product= capacc1
/note= "Sequence rep:
                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1..1104
                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthase capacc1 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67.0%;
56.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           English
                                                                                                                                                                                                                                                                                           "Sequence represents 75% of the coding sequence and does not contain the start or ston codons"
                                                                                                                                                                                                                                                                                                                                                     ρ
                                                                                                                                                                                                                                                                                    or stop codons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 15.4;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.6e+02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                    in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1098;
                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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RESULT 11
AAT72632
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This sequence represents a novel gene, capacc1, a member of the papaya ACC synthase multigene family. ACC synthase is an enzyme involved in the pathway for ethylene biosynthesis and the rate of endogenous expression of ACC synthase is considered to limit substantially the rate of ethylene production. Endogenous ethylene is often deleterious to crops, especially if some form of mechanical wounding has occurred and diminishes their post harvest quality and storage life. Novel ACC synthase genes expressed in transgenic plants using either sense or antisense expression system may be used to control the regulation of plant development, in particular fruit ripening, reducing senescence and the sense of the synthase genes expression system may be used to control the regulation of plant development, in particular fruit ripening, reducing senescence and the synthase genes expression system may be used to control the regulation of plant development, in particular fruit ripening, reducing senescence and the synthase genes expression system may be used to control the regulation of plant development.
                                                                                                                                                     WPI; 199
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACC synthase; S-adenosyl-L-methionine methylthioadenosine lyase; miacc2; ethylene biosynthesis; transgenic plant; senescence; antisense expression system; plant development; fruit ripening; EC 4.4.1.14; mango; multigene family; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1104 BP; 325 A; 214 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    thus improving storage life.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mangifera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mangifera indica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-JAN-1998
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This sequence represents the novel gene, miacc2, which is a member of the mango ACC synthase multigene family. ACC synthase an enzyme involved in the pathway for ethylene biosynthesis and the rate of
                                                                                                      Pineapple,
therapy to
                                                                                                                                                                                                                                                                         02-MAY-1996;
20-SEP-1995;
                                                                                                                                                                                                                                                                                                                                                                                             W09711166-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     697
                                                                    Claim 5; Fig 5; 46pp; English
                                                                                                                                                                                                        Botella
                                                                                                                                                                                                                                    (UYQU ) UNIV
                                                                                                                                                                                                                                                                                                                         20-SEP-1996;
                                                                                                                                                                                                                                                                                                                                                            27-MAR-1997
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                                                                                                                                                     1997-202875/18.
DB; AAW18290.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard; DNA; 1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 indica
                                                                                                    papaya and mango ACC synthase genes - used produce fruits with reduced senescence % \left( 1\right) =\left\{ 1\right\} 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                        QUEENSLAND
                                                                                                                                                                                                                                                                         96AU-0009603
95AU-0005559
                                                                                                                                                                                                                                                                                                                           96WO-AU00591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             /product= miacc2
/note= "Sequence represents 75% of the coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /EC_number= 4.4.1.14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67.0%;
56.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthase miacc2 gene.
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                                                                                                                                                                                                                                                                                                                                                                                                                               or stop codons."
                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 15.4; DB 18; Pred. No. 1.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           257 G; 308 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                               does not contain the start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6
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γQ

Matches

Local

Similarity

67.0%; 56.5%;

Score 15.4; Pred. No. 1. Mismatches

.6e+02;

6; Indels

0,

Gaps

0;

DB 18;

Length 1113;

Conservative

4;

SSSSSSSSX&

endogenous expression of ACC synthase is considered to limit substantially the rate of ethylene production. Endogenous ethylene is often deleterious to crops, especially if some form of mechanical wounding has occurred and diminishes their post harvest quality and storage life, wovel ACC synthase genes expressed in transgenic plants using either same or antisense expression system may be used to control the regulation of plant development, in particular fruit ripening, reducing senes expressed and thus improving storage life.

Sequence 1113 NP; 320 A; 212 C; 264 G; 317 T; 0 other;

0,

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AA766247

AA7662
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Query Match
                                                                                                                         2 DNA sequences (AAT66246-47) respectively code for 1-aminocyclopropahe carboxylage synthases (ACC synthase) GAC-1 (AAW09878) and GAC-2 (AAW09878), enzymes involved in the biosynthesis of ethylene in plants. In a method for the commercial production of transgenic plants, Agrobacterium vectors carrying antisense to inoculate periole explants of amother plant, pref. Pelargonium x domysticum. The resulting callus is cultured and used to regenerate transgenic plants. The antisense genes for ACC synthase or ACC oxidase expression and hence ethylene formation and fruit ripening.
                                                                 Sequence 1170 BF; 319 A; 263 C; 297 G; 291 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 14; Page 24; 36pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Commercial propagation of transgenic plants by tissue culture - especially Pelargonium x domesticum with decreased ethylene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-NOV-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACC synthase: 1-gminocyclopropane-1-carboxylate synthase; antisense; ethylene; transgépic plant; Pelargonium x domesticum; in vitro propagation; tissue culture; ripening; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT66247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Arteca J, Artesa RN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (OGLE-) OGLEVEE LITD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-NOV-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACC synthase GAC-2 DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAT66247 standerd; DNA; 1170 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-MAY-1997.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1997-281013/25.
DB; AAW09873.
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67.0%;
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Score 15.4;
DB 18;
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Length 1170;
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Дb
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Matches 13; Conserv
Brassica oleracea genomic clone ACCA1 (AAT33136) codes for 1-aminocyclopropyl-1-carboxylic acid synthase (ACC-synthase) (AAR98598), an enzyme involved in ethylene biosynthesis. It was obtd. by subjecting broccoli leaf total genomic DNA to PCR using primers (see also AAT33137-38) based on the Arabidopsis thaliana ACC synthase gene. The product was cloned into pCRII to obtain clone ACCA1. Genomic DNA or cDNA (see also AAT33139) can be inserted, in sense or antisense orientation, into an expression cassette and then transferred to a binary vector suitable for Agrobacterium-mediated
                                                                                                                                             DNA encoding 1-amino:cyclo:propyl-1-carboxylic acid synthase of Brassica oleracea - used to regulate ethylene-dependent processes in plants, esp. to improve shelf life
                                                                                                                                                                                                                                                                                                          07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Brassica oleracea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antisense; broccoli;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACC synthase; 1-aminocyclopropyl-1-carboxylic acid synthase;
ethylene; shelf-life; Cucumis melo; melon; transgenic plant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Broccoli ACC synthase genomic DNA clone ACCAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-DEC-1996
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                                                                                                                        Claim 2; FiglA-B; 50pp; English.
                                                                                                                                                                                                P-PSDB; AAR98598
                                                                                                                                                                                                            WPI; 1996-334002/33.
                                                                                                                                                                                                                                  Boeshore ML,
                                                                                                                                                                                                                                                          (ASGR-) ASGROW SEED CO.
                                                                                                                                                                                                                                                                                 30-DEC-1994;
                                                                                                                                                                                                                                                                                                                                 11-JUL-1996.
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                                                                                                                                                                                                                                                                                                                                                                                                       primer_bind
                                                                                                                                                                                                                                                                                                                                                                                                                               exon
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAT33136;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGNYTNCCNGGNTTYMGNRTNGG 23
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                                                                                                                                                                                                                                 Carney KJ,
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38..134
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/note= "primer RMM394"
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                                                                                                                                                                                                                                 Reynolds JF,
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6;
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RESULT 15
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                                                                                                                                                                                                                                                         acid (ACC) synthetase (EC 4.4.1.14) was obtd. by screening a cDNA library prepd. from Cucurbita maxima max. EC4.4.1.14 obtd. from cDNA library clones was screened by an antibody method to identify colonies producing EC 4.4.1.14, e.g. E.coli DH5 alpha/pCMW33. Blosynthesis of ethylene is controlled by ACC synthetase. Ethylene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    plant transformation. The constructs permit control of the level of ACC synthase in a transgenic plant (esp. B. oleracea or Cucumis melo) and hence a control of maturation, ageing and shelf-life.
AAQ15131;
                           AAQ15131 standard; cDNA; 1703
                                                                                                                                                                                                                   Sequence 1482 BP; 415 A; 341 C; 344 G; 382 T; 0 other;
                                                                                                                                                                                                                                              controls the growth, maturing and aging of higher plants.
                                                                                                                                                                                                                                                                                                                  The gene encoding detriment induced 1-aminocyclopropane-1-carboxylic acid (ACC) synthetase (EC 4.4.1.14) was obtd. by screening a cDNA acid (ACC) synthetase (EC 4.4.1.14) was obtd. by screening a cDNA
                                                                                                                                                                                                                                                                                                                                                                  Claim 3; Fig 1; 10pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                        Detriment induced ACC synthetase gene - used for control of bio-synthesis of ethylene, for controlling growth, maturity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1-aminocyclopropane-1-carboxylic acid synthetase; detriment;
ethylene; growth; maturity; aging; plant; ss.
                                                                                                                                                                                                                                                                                                                                                                                            ageing of higher plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                       P-PSDB; AAR25406.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31-OCT-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-JUN-1992.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cucurbita maxima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACC synthetase gene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAQ25896 standard; cDNA; 1482
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1992-253389/31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (SUMO ) SUMITOMO CHEM CO LTD
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13; Conserv
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Pred. No. 1.6e+02;
4; Mismatches 6;
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Search completed: March 10, Job time: 179.5 secs

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В
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                                                                                                                Query Match
Best Local Similarity
                                                        Matches
                                                                                                                                       The ACC synthase cDNA was isolated from C.pepo using a novel method. • A cDNA expression library was prepared from induced plant tissue. The library was screened with an antibody preparation obtained by partially purifying the induced ACC synthase and using it to immunise a suitable mammal. Immunoreactive clones were isolated and sequenced. One of these, pACC1, contained an open reading frame corresponding to a protein of 493 amino acids and mol. wt. 55.779 kD. See also AAQ15132-Q15140.

(Note: Revised entry submitted to correct the patent number format of US Government-owned NTIS applications to prevent clashes with ongoing US granted patent numbers. For further information please visit the Derwent web site at www.derwent.com/dwpi/updates/ntis_us.html.)
                                                                                                              Sequence 1703 BP; 481 A; 359 C; 378 G; 485 T; 0 other;
                                                                                                                                                                                                                                                                                                                               Disclosure; Fig 1B; 73pp; English.
                                                                                                                                                                                                                                                                                                                                                         DNA encoding ACC synthase - used for control of plant development and for prodn. of ACC synthase, ethylene and ethanol
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clone pACC1 encoding the Zucchini ACC synthase
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09-MAR-1992
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-SEP-1990;
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854 GGCCTCCCTGGTTTTCGAGTTGG 876
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                          GGNYTNCCNGGNTTYMGNRTNGG 23
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56.5%;
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                                                                      Score 15.4; DB 12
Pred. No. 1.6e+02;
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    nucleic search, using sw model

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ACC synthase gene
PCR primer #2 used
Arabidopsis thalia
Carnation ACC synt
Mangifera indica A
Carica papaya ACC
Carica papaya ACC
Human ATP-dependen
ACC synthase GAC-2
                                                                                                                                                                                                                        Description
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | ω 5 | 34 | ယ | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 |
|----------|----------|--------------------|----------|----------|--------------------|--------------------|--------------------|--------------------|--------------------|----------|------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------|----------|----------|----------|----------|------|----------|--------------------|--------------------|--------------------|------------|----------|----------|----------|--------|---------------|--------------------|
| <u>ب</u> | ŗ٦ | 5 | ū | 5 | | <u>ب</u> | | | Çī | ŭ. | | | J٦. | 5 | ū | 5 | 5 | <u>ب</u> | 5 | Т | Г | <u>ن</u> | | | | 5 | 5 | <u>ر</u> | П | 5 | | 5 | 5 | 15.2 | ٠ |
| 66.1 | σ. | 66.1 | σ. | 6 | <u>ა</u> | 66.1 | 6 | 6. | | σ. | 66.1 | σ. | σ. | σ. | σ, | 6. | σ. | 66.1 | σ, | 5 | 66.1 | σ, | σ, | σ, | | О | σ | σ. | σ, | 5 | О | ა | 66.1 | 66.1 | 66.1 |
| 7587 | 7587 | 7244 | 7244 | 7244 | 7241 | 5613 | 3438 | 2678 | 2230 | 2230 | 2230 | 2088 | 1945 | 1942 | 1934 | 1923 | 1888 | 1878 | 1868 | 1818 | 1818 | 1800 | 1793 | 1783 | 1781 | 1780 | 1775 | 1743 | 1712 | 1712 | 1703 | 1703 | 1703 | 1703 | œ |
| 19 | 12 | 22 | 22 | 19 | 12 | 15 | 20 | 19 | 22 | 22 | 19 | 19 | 19 | 17 | 18 | 21 | 19 | 19 | 18 | 22 | 12 | 19 | 12 | 12 | 12 | 12 | 12 | 19 | 22 | 20 | 22 | 22 | 19 | 12 | 13 |
| AAV15703 | AAQ15133 | AAF23622 | AAD04545 | AAV15705 | AAQ15140 | AAQ63241 | AAX35671 | AAV30325 | AAF23621 | AAD04544 | AAV15704 | AAV20947 | AAV30324 | AAT38896 | AAT66246 | AAZ94267 | AAV31482 | AAV30326 | AAT73502 | AAD04546 | AAQ15135 | AAV09713 | AAQ15139 | 13 | AAQ15137 | AAQ15138 | AAQ15134 | AAV30330 | AAS09901 | AAX27501 | AAF23618 | AAD04541 | 70 | 1513 | AAQ25896 |
| ACC | () | Tomato ACC synthas | 1-a | ⊅ | Genomic clone-LE-A | Crucifer 1-aminocy | DNA encoding a 1-a | Pelargonium 1-amin | Tomato ACC synthas | 1-am | ACC syntha | Coffee-fruit speci | Pelargonium 1-amin | Carnation ACC synt | ACC synthase GAC-1 | Mung bean ACC synt | Papaya ACC synthas | Pelargonium 1-amin | | > 1-amin | e ptACC2 | | | | | Clone ptACC5 encod | Clone ptACC1 encod | Rose 1-aminocyclop | oding 1-am | | | | ini AC | ne pACC1 encc | ACC synthetase gen |

ALIGNMENTS

AAAV30329
ID AAAV3
XX AAV3
XX AAV3
XX AAV3
XX AAV3
XX AAV3
XX AAV3
XX AACC
XX ACC
XX A Synthetic. Pelargonium Rosa sp. Key modified_base modified_base modified_base modified_base ACC synthase; 1-aminocyclopropane-1-carboxylate synthase; ethylene; transgenic plant; wilting; geranium; rose; PCR; ACC synthase gene PCR primer II. AAV30329 standard; DNA; 23 BP modified_base 28-SEP-1998 × (first entry) hortorum /*tag= b /mod_base= 6 /*tag= d /mod_base= 18 /*tag= c /mod_base= 15 /*tag= a /mod_base= Location/Qualifiers primer;

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RESULT 2
AAS19699
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New isolated ACC synthase genes - are obtained from geranium and rose, used to develop products for producing plants with reduced ethylene levels, for increasing shelf-life
                  (COLS ) UNIV COLORADO STATE. (TAGA-) TAGAWA GREENHOUSES I
                                                                                               09-MAY-2000;
12-OCT-2000;
                                                                                                                                                                          09-MAY-2001;
                                                                                                                                                                                                                                                                               WO200185754-A1
                                                                                                                                                                                                                                                                                                                                 Pelargonium x hortorum
                                                                                                                                                                                                                                                                                                                                                                                                         Geranium; 1-aminocyclopropane-1-carboxylate synthase ACC synthase; plant transcription regulation; plant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PCR primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAS19699 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                $equence 23 BP; 5 A; 5 C; 0 G; 1 T; 12 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-260994/23.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAS19699;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example; Page 37; 77pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ranu RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9814465-A1
                                                                                                                                                                                                                               15-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (COLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
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                                                                                                                                                                                                                                                                                                                                                                                    synthase; plant sacc49; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CANANNCKRAASMANCCNRSYTC 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             shipping
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                               2000US-203021P.
2000US-239782P.
                                                                                                                                                                          2001WO-US15023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COLORADO STATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96US-0724194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97WO-US17644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and storage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= e
/mod_base= i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ţ
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100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amplify
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 15.2;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA fragment of geranium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                       gene promoter;
PCR; primer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PHSacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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RESULT 3
ABQ65439
ID ABQ6
Db
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 geranium (Pelargonium x hortorum) genomic clone PHSacc49 (gPHSacc49) This promoter represents the ACC (1-aminocyclopropane-1-carboxylate) synthase gene promoter. The promoter is useful to regulate the transcription level of a coding sequence in geranium and other plants. The present sequence represents a PCR primer used to amplify a DNA fragment of geranium PHSacc genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New promoter from the 1-aminocyclopropane-1-carboxylase synthase of geranium, useful to regulate level of transcription of coding sequence in geranium and other plants \,
                         (DAVI/)
                                                             (HAAS/)
(GARC/)
                                                                                                                                       (PRIC/)
(RAIN/)
                                                                                                                                                                                                                                                                                                  Arabidopsis thaliana; thale stress; metabolic pathway; l
                                           (KRIC/)
(SLAT/)
                                                                                 (LEDF/)
                                                                                                                                                                                              27-JAN-2000; 2000US-178506P
                                                                                                                                                                                                               26-JAN-2001; 2001US-0770149
                                                                                                                                                                                                                                 16-MAY-2002
                                                                                                                                                                                                                                                    US2002059663-A1
                                                                                                                                                                                                                                                                     Arabidopsis thaliana
                                                                                                                                                                                                                                                                                       insecticide;
                                                                                                                                                                                                                                                                                                                          Arabidopsis thaliana polynucleotide
                                                                                                                                                                                                                                                                                                                                             21-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                  ABQ65439 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim
        (HURB/)
                                                                                                                               (/४४७४)
                                                                                                                                                                   (XYYNA)
                                                                                                   (MATH/)
                                                                                                             (PAGE/)
                                                                                                                     (RAME/)
                 HOFF/)
                                                                                                                                                                                                                                                                                                                                                                                                                                               1 CANANNCKRAASMANCCNRSYTC 23
                                                                                                                                                                                                                                                                                                                                                                                                                              1 CANANNCKRAASMANCCNRSYTC 23
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7; Fig 2;
      HAAS W D.
GARCIA C A.
KRICKER M.
SLATER T.
DAVIS K R.
ALLEN K.
HOFFMAN N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 23; Conserv
                                                                             WOESSNER J P.
                                                                                                  PAGE A.
MATHEW A V.
                                                                                                                                      PRICE J L.
RAINES T M.
                                                                                          LEDFORD B L
                                                                                                                     RAMEAKA J G
                                                                                                                                YU Y
                                                                                                                                                         HAMILTON C M
                                                                                                                                                                    AN Y
                                                                                                                                                                           GORLACH J.
                                                                                                                                                                                                                                                                                                metabolic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP; 5 A;
                                                                                                                                                                                                                                                                                       antibiotic;
                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38pp;
                                                                                                                                                                                                                                                                                      pathway; bi
                                                                                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 C; 0 G; 1 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                English
                                                                                                                                                                                                                                                                                                                                                                                  748
                                                                                                                                                                                                                                                                                                e cress; plant;
biosynthetic p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                 ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 15.2;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                           SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 other;
                                                                                                                                                                                                                                                                                               pathway;
                                                                                                                                                                                                                                                                                                                           ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 24;
                                                                                                                                                                                                                                                                                               transgenic; GMO; cathway; nutrition;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                          GMO; disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                fungicide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  plants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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RESULT 4
ANT38897/c
ANT388
AC AAT388
AC AAT388
AC AAT388
AC Carnat
KW Carnat
KW ACCS;
KW Trans;
COS Diant;
XX W0963
AC O9-MA
AC O
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                            (ALLR-)
(FLOR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to nucleic acids (I) that hybridise under stringent conditions to any of 999 sequences (ABB05422+ABB06422) or their fragments. (I) are used to express the corresponding polypeptides (II) or to produce genetically modified plant cells or transgenic plants, which may have improved resistance to disease or stress, or altered metabolic/biosynthetic pathways (for production of commercial, nutritional or medicinal products), or generally any trait of interest, or can be used to screen for biologically active agents (e.g. fungicides, insecticides and antibiotics).

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from the USPTO at sequence.html?DocID=999909770149.
Producing transjebic plants, with reduced climacteric ethylene prodn. - to give flowers and buds, specifically carnations, with increased post-harvest life
                                                                                                                                                                                                                                                                                                                       09-MAY-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gorlach J,
Rameaka JG,
Garcia CA,
Hurban P;
                                                                                                 WPI; 1996-51868
P-PSDB; AAW0455
                                                                                                                                                                                                                                                                                                                                                                09-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                  14-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dianthus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carnation; 1-aminocyclopentane-1-carboxylic acid synthase; ACC synthase; co-suppression; ethylene; senescence;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               useful e.g. for preparing transgenic plants with or altered metabolism
                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9635792-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             transgenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Carnation ACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAT38897 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         217 CAAACCCTAAACCATCCGACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match 66.1%;
Local Similarity 47.8%;
les 11; Conservative
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                                                                                                                                                                      h EC,
                                                                                                                                                                                                                                         ALLRAD NO 1 PTY LTD. FLORIGENE, INVESTMENTS PTY LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                748 BF; 209 A; 202 C; 120 G; 213 T; 4 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 16; 40pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           plant; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    An Y. Hami
, Page A, M
Kricker M,
                                                                                                                                                                                            Gr.aham
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthase gene fragment.
                                                                                                                       )/51.
                                                                                                                                                                                                                                                                                                                                                                36WO-AU00286
                                                                                                                                                                                                                                                                                                                    35AU-0002862.
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                                                                                                                                                                                            , WM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sin.
                                                                                                                                                                                            Gutterson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 15.2; DB 24;
Pred. No. 2.8e+02;
7; Mismatches 5;
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Ledford BL, Woessner
, Davis KR, Allen K,
                                                                                                                                                                                            , IN
                                                                                                                                                                                            Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 24;
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JP, Haas WD;
Hoffman N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   748;
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RESULT 5
AAT72631/c
ID AAT72631 standard; DNA; 1096
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                               Pineapple,
therapy to
 This sequence
                          Claim
                                                                                    WPI; 1997-202875/18
P-PSDB; AAW18289.
                                                                                                                                                                      02-MAY-1996;
20-SEP-1995;
                                                                                                                        Botella
                                                                                                                                                                                                                                                                                                                                                                                                              ACC synthase; S-adenosyl-L-methionine methylthioadenosine lyase; miaccl; ethylene biosynthesis; transgenic plant; senescence; antisense expression system; plant development; fruit ripening; EC 4.4.1.14; mango; multigene family; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1085 CAAACCCTAAACCACCCTGGCTC 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A non full-length gene (AAT38897) comprises nucleotides 287-1373 of a 1-aminocyclopentane-I-carboxylic acid (ACC) synthase gene (AAT38896) isolated. from carnation cv. White Sim. It was obtd. by PCR amplification of carnation cDNA using primers (AAT38899-900) based on highly conserved regions of the ACC synthase gene. Transgenic carnation plants carrying the non full-length gene show reduced prodn. of ACC synthase or ACC synthase-specific mRNA as a result of co-suppression. This leads to decreased climacteric ethylene prodn. by the plant and hence delayed senescence of flowers and buds after cutting, and increased post-harvest life.
                                                                                                                                              (UYQU ) UNIV
                                                                                                                                                                                                         20-SEP-1996;
                                                                                                                                                                                                                                                          WO9711166-A1
                                                                                                                                                                                                                                                                                                                                                                                           Mangifera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mangifera indica ACC synthase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAT72631;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1087 BP; 309 A; 204 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 10; Page 42-44; 98pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CANANNCKRAASMANCCNRSYTC 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                      4; Fig 4; 46pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l Similarity
11; Conserv
                                                                                                                                                                                                                                                                                                                                                                                             indica
                                             papaya and mango ACC synthase genes - produce fruits with reduced senescence
                                                                                                                                              QUEENSLAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
 represents
                                                                                                                                                                      96AU-0009603
95AU-0005559
                                                                                                                                                                                                          96WO-AU00591
                                                                                                                                                                                                                                                                               /product= miacc1
/EC_number= 4.4.1.14
/EC_number= 8.4.1.14
/note= "Sequence represents 75% of the coding sequence and does not contain the start or stop codons."
                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                             /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66.1%;
47.8%;
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 novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 15.2; DB 17;
Pred. No. 3e+02;
7; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              miacc1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             251 G; 323 T; 0 other;
gene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene.
 miacc1,
 which
                                                           used
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
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Вþ QΥ

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RESULT 6
AAT72630/c
  Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of an ACC synthase multigene family found in mango. ACC synthase is involved in the pathway for ethylene biosynthesis and the rate of endogenous expression of ACC synthase is considered to limit substantially the rate of ethylene production. Endogenous ethylene is often deleterious to crops, especially if some form of mechanical wounding has occurred and diminishes their post harvest quality and storage life. Novel ACC synthase genes expressed in transgenic plants using either sense or antisense expression system may be used to control the regulation of plant development, in particular fruit ripening,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Carica papaya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antisense expression EC 4.4.1.14; papaya;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                           of the ACC
                                                                                                                                                                      Botella
                                                                                                                                                                                                                         02-MAY-1996;
20-SEP-1995;
                                                                                                                                                                                                                                                                                                                  W09711166-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Carica papaya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAT72630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                reducing
            synthase is
                                                                 Claim
                                                                                        therapy
                                                                                                      Pineapple,
                                                                                                                                 P-PSDB;
                                                                                                                                                                                             (UYQU ) UNIV
                                                                                                                                                                                                                                                               20-SEP-1996;
                                                                                                                                                                                                                                                                                         27-MAR-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGACTCTGAACCAACCAGGCTC 1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CANANNCKRAASMANCCNRSYTC
                                      sequence represents
                                                                                                                                1997-202875/18
)B; AAW18288.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                           ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  senescence and thus improving
                                                              Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ethylene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1096 BP; 302 A; 227 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
nce represents a novel gene, capacc2, which is a member synthase multigene family found in papaya. The enzyme is involved in the pathway for ethylene biosynthesis and dogenous expression of ACC synthase is considered to li
                                                                                       papaya and mango ACC produce fruits with 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ylene biosynthesis; transgenic plant; senescence; pression system; plant development; fruit ripening; papaya; multigene family; ss.
                                                                 ω
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                QUEENSLAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S-adenosyl-L-methionine methylthioadenosine lyase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACC synthase capacc2
                                                                                                                                                                                                                         96AU-0009603
95AU-0005559
                                                                                                                                                                                                                                                               96WO-AU00591
                                                              46pp;
                                                                                                                                                                                                                                                                                                                                                                      /note=
                                                                                                                                                                                                                                                                                                                                                                                /product= capacc2
                                                                                                                                                                                                                                                                                                                                                                                              /EC_number= 4.4.1.14
                                                                                                                                                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                66.18;
47.88;
                                                                English.
                                                                                                                                                                                                                                                                                                                                          "Sequence represents 75% of the coding sequence and does not contain the start or stop codons."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 15.2;
                                                                                           reduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         255 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                       synthase genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         312 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  storage life.
                                                                                           senescence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18;
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                                                                                                          used
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    to limit
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This sequence represents a novel gene, capaccl, a member of the papaya ACC synthase multigene family. ACC synthase is an enzyme involved in the pathway for ethylene biosynthesis and the rate of endogenous expression of ACC synthase is considered to limit substantially the rate of ethylene production. Endogenous ethylene is often deleterious to crops, especially if some form of mechanical wounding has occurred and diminishes their post harvest quality and storage life wow.

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AAT72629/c
ID AAT72
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    substantially the rate of ethylene production. Endogenous ethylene i often deleterious to crops, especially if some form of mechanical wounding has occurred and diminishes their post harvest quality and storage life. Novel ACC synthase genes expressed in transgenic plant using either sense or antisense expression system may be used to cor the regulation of plant development, in particular fruit ripening, reducing senescence and thus improving storage life.
                                                                                                                                                                                                                                                                                                                                                                                                                capacol; ethylene biosynthesis; transgenic plant; senescence; antisense expression system; plant development; fruit ripening; EC 4.4.1.14; papaya; multigene family; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                               ACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1098 BP;
                                                                                                                                                                                                                                                                                                                                                                                             Carica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Carica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAT72629;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAT72629 standard; DNA; 1104
                                                                                                                                 P-PSDB; AAW18287
                                                                                                                                                                                                      02-MAY-1996;
20-SEP-1995;
                                                                                                                                                                                                                                                                              W09711166-A1
                                                                                Claim
                                                                                                             Pineapple,
                                                                                                                                                              Botella
                                                                                                                                                                                                                                      20-SEP-1996;
                                                                                                                                                                                                                                                         27-MAR-1997
                                                                                                   therapy
                                                                                                                                                                                   (UYQU ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     سز
                                                                                                                                                                                                                                                                                                                                                                                                                                              synthase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CANANNCKRAASMANCCNRSYTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATACTCTGAACCACCCCGGCTC 1069
                                                                                                                                            1997-202875/18.
                                                                              2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  papaya
                                                                                                                                                                                                                                                                                                                                                                                            papaya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity 47.8
ll; Conservative
                                                                                                   ť
                                                                                                                                                                JR;
                                                                             Fig
                                                                                                           papaya and mango ACC synthase genes
                                                                                                   produce fruits with reduced
                                                                              2; 46pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                   QUEENSLAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACC
                                                                                                                                                                                                                                                                                                                                                                                                                                               S-adenosyl-L-methionine methylthioadenosine lyase;
                                                                                                                                                                                                                 96AU-0009603
                                                                                                                                                                                                                                       96WO-AU00591
                                                                                                                                                                                                        95AU-0005559
                                                                                                                                                                                                                                                                                                                       /note=
                                                                                                                                                                                                                                                                                                                                /product= capaccl
                                                                                                                                                                                                                                                                                                                                     /*tag= a
/EC_number= 4.4.1.14
                                                                                                                                                                                                                                                                                                                                                                        ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                ...1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  synthase capaccl gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   276 A; 275 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66.1%;
47.8%;
                                                                                English.
                                                                                                                                                                                                                                                                                                "Sequence represents 75% of the sequence and does not contain t or stop codons."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   299 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15.2; DB :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   248 T; 0 other;
                                                                                                    senescence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5;
                                                                                                              used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                               in
                                                                                                                                                                                                                                                                                                                         coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sgenic plants
used to control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1098;
                                                                                                               gene
                                                                                                                                                                                                                                                                                                              start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
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synthase genes ekpressed in transgenic plants using either sense or antisense expression system may be used to control the regulation of plant development, in particular fruit ripening, reducing senescence thus improving storage life.

senescence

and

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AAH77094/C
ID AAH77094
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9999888
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Best L
This sequence represents cDNA encoding human ATP-dependent serine proteinase 31. The protein has a molecular weight of 31 kD. The inven relates to human ATP-dependent serine proteinase 31 (AAA66837), nucle of ATP-dependent serine proteinase 31 continuous for the recombinant produc of ATP-dependent serine proteinase 31. The present invention addition discloses an antagonist of ATP-dependent serine proteinase 31 for therapeutic use, and an antibody which specifically binds to ATP-dependent serine proteinase 31. ATP-dependent serine proteinase 31, a nucleotides which encode it may be used for treating a variety of diseases, such as malignant tumours, blood diseases, HTV (human immunodeficiency virus) infection, immune disorders and inflammatory conditions. The protein may also be used to screen for modulators of activity or for paptide fingerprinting identification. The polynucleo
                                                                                                                                                                                                   Claim
                                                                                                                                                                                                                           Human adenosine triphosphate dependent serine proteinase 31 and encoded polynucleotide, applicable in diagnosis and treatment of malignant tumor, hemopathy, human immunodeficiency virus infection, immunological diseases and inflammation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; ATP-dependent serine proteinase 31; recombinant production; malignant tumour; cancer; blood disease; HIV infection; human immunodeitélency virus; immune disorder; inflammatory condit cytostatic; anti'HIV; antiinflammatory; immunomodulator; ss.
                                                                                                                                                                                                                                                                                                                                                                                          24-MAR-2000; 200qcN-0115085
                                                                                                                                                                                                                                                                                                                                                                   (SHAN-)
                                                                                                                                                                                                                                                                                                                                                                                                                     23-MAR-2001; 2001WO-CN00405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200175125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1097 CAGACGCTGIACCAGCCAGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1104
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 CANANNCKRIASMANCCNRSYTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jocal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match
                                                                                                                                                                                                                                                                                                2001-626440/72.
DB; AAG66837.
                                                                                                                                                                                                   6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATP-dependent serine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 Similarity
11; Conser
                                                                                                                                                                                                                                                                                                                                                                 SHANGHAI BIOWINDOW GENE
                                                                                                                                                                                                  Page 30-31; 36pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP: 325 A; 214 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= a
/product= "Human ATP-dependent serine proteinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            66
47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1154
                                                                                                                                                                                                  Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  proteinase 31-encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 15.2; DB Pred. No. 3e+02; Mismatches
                                                                                                                                                                                                                                                                                                                                                                 DEV INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                257 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              308 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              inflammatory condition;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1104;
      polynucleotide
                                                                                                              The invention 37), nucleic ant production additionally
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                        and
                  its
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QY

1 CANANNCKRAASMANCCNRSYTC

Query Match Best Local S Matches 11

Similarity

66.1%; 47.8%;

Score 15.2; DB Pred. No. 3e+02;

18;

1170;

Mismatches

5

Indels Length

0;

Gaps

0;

Conservative

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RESULT 9
AAT66247/c
LD AAT66247 standard; DNA; 1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Дb
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSXCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                  2 DNA sequences (AAT66246-47) respectively code for 1-aminocyclopropane carboxylase synthases (ACC synthase) GAC-1 (AAW09878), enzymes involved in the biosynthesis of ethylene in plants. In a method for the commercial production of transgenic plants, Ayrobacterium vectors carrying antisense genes for ACC synthase or ACC oxidase (see also AAT66248) are used to inoculate peticle explants of a mother plant, pref. Pelargonium x domesticum. The resulting callus is cultured and used to regenerate transgenic plants. The antisense genes prevent ACC synthase or ACC oxidase expression and hence ethylene formation and fruit ripening.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   can be used as a probe for hybric microarrays.
                                                                                                                                                                                                                                                                                  (OGLE-)
                                                                                                                                                           Claim
                                                                                                                                                                                            Commercial especially
  Sequence 1170 BP;
                                                                                                                                                                                 formation
                                                                                                                                                                                                                                                               Arteca
                                                                                                                                                                                                                                                                                                                     09-NOV-1995;
                                                                                                                                                                                                                                                                                                                                          08-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                              ACC synthase; 1-aminocyclopropane-1-carboxylate synthase; ethylene; transgenic plant; Pelargonium x domesticum; in vitro propagation; tissue culture; ripening; ss.
                                                                                                                                                                                                                                                                                                                                                                  15-MAY-1997.
                                                                                                                                                                                                                                                                                                                                                                                       WO9717429-A1
                                                                                                                                                                                                                                                                                                                                                                                                             Not identified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACC synthase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAT66247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1154 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       174 CAGAGACGGAAGCAGCCAAGCTC 152
                                                                                                                                                                                                                              -PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CANANNCKRAASMANCCNRSYTC 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rocar
                                                                                                                                                                                                                             1997-281019/25
DB; AAW09879.
                                                                                                                                                          14; Page 24; 36pp;
                                                                                                                                                                                                                                                             'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
11; Conser
                                                                                                                                                                                                                                                                                  OGLEVEE LTD.
PENN STATE RES
                                                                                                                                                                                         propagation of transgenic plants by tissue culture Pelargonium {\bf x} domesticum with decreased ethylene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ed as a primer
hybridisation
                                                                                                                                                                                                                                                             Arteca RN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAC-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                    9508-0555755
                                                                                                                                                                                                                                                                                                                                          96WO-US17954
319 A; 263 C; 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              302 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              66.
                                                                                                                                                                                                                                                                                   FOUND
                                                                                                                                                                                                                                                            Oglevee-O'Donovan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for nucleic reactions, o
                                                                                                                                                         English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              228 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 15.2; I
Pred. No. 3e+0
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15.2; DB
No. 3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             c acid amplification reactions or in producing gene chips or
G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ç;
 291 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             334 T; 0
                                                                                                                                                                                                                                                            ¥,
                                                                                                                                                                                                                                                            Stoots
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22;
0
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other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       antisense; .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          as
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В

1163 CAGACTCTGAACCACCCTGGCTC

1141

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RESULT 11
AAQ15131/C
ID AAQ15
XX AAQ15
XX AAQ15
XX AAQ15
XX OAQ15
XX OP-M
DT 17-DI
DT 09-M
XX I-am.
KW COURT
XX
XX COURT
XX CUCUT
XX KW KW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
AAQ25896/c
                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                    The gene encoding detriment induced 1-aminocyclopropane-1-carboxylic acid (ACC) synthetase (EC 4.4.1.14) was obtd. by screening a cDNA library prepd. from Cucurbita maxima mRNA. EC4.4.1.14 obtd. from cDNA library clones was screened by an antibody method to identify colonies producing EC 4.4.1.14, e.g. E.coli DH5 alpha/pCMW33. Biosynthesis of ethylene is controlled by ACC synthetase. Ethylene controls the growth, maturing and aging of higher plants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ25896 standard; cDNA; 1482
                                                                                                                                                                                                  1244
                                                                                                                                                                                                                                                                                                                                                                                                        Detriment induced ACC synthetase gene - use bio-synthesis of ethylene, for controlling ageing of higher plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1992-253389/31.
P-PSDB; AAR25406.
                                                                                                                                                                                                                                                                                 Sequence 1482 BP; 415 A; 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-OCT-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JP04169183-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cucurbita maxima.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1-aminocyclopropane-1-carboxylic acid synthetase; ethylene; growth; maturity; aging; plant; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACC synthetase gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-JAN-1993
                                                                      Clone pACC1
                                                                                            17-DEC-2001
09-MAR-1992
                                                                                                                                               AAQ15131 standard;
                                                                                                                                                                                                                                                                                                                                                                                       Claim 3; Fig 1; 10pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-OCT-1990;
                     Cucurbita pepo
                                        courgette;
                                                                                                                           AAQ15131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (SUMO ) SUMITOMO CHEM CO LTD
                                                   l-aminocyclopropane-1-carboxylic acid synthase;
                                                                                                                                                                                                                                         Local Similarity
les 11; Conserv
                                                                                                                                                                                                                     1 CANANNCKRAASMANCCNRSYTC
                                                                                                                                                           <u>ک</u>
                                                                                                                                                                                                  CAAACTCGAAACCAACCTGGCTC 1222
                                          ss.
                                                                      encoding the Zucchini ACC synthase.
                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                           (updated)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90JP-0296943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90JP-0296943.
  Location/Qualifiers
                                                                                                                                               cDNA; 1703
                                                                                            entry)
                                                                                                                                                                                                                                                    66.1%;
47.8%;
                                                                                                                                                                                                                                         7;
                                                                                                                                                                                                                                                   Score 15.2;
Pred. No. 3.
                                                                                                                                                                                                                       23
                                                                                                                                                                                                                                                                                  C; 344 G; 382 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                                                                               ВР
                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                               used for control
                                                                                                                                                                                                                                        3.1e+02;
5;
                                                                                                                                                                                                                                                                                                                                                                                                                    ed for control of growth, maturity
                                                     fruit ripening;
                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      detriment;
                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                 1482;
                                                                                                                                                                                                                                                                                                                                                                                                                      and
                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                            0;
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RESULT 12
AAV15701/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 11; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The ACC synthase cDNA was isolated from C.pepo using a novel method. A cDNA expression library was prepared from induced plant tissue. The library was screened with an antibody preparation obtained by partially purifying the induced ACC synthase and using it to immunise a suitable mammal. Immunoreactive clones were isolated and sequenced. One of these, pACC1, contained an open reading frame corresponding to a protein of 493 amino acids and mol. wt. 55.779 kD. See also AAQ15132-Q15140.
(Note: Revised entry submitted to correct the patent number format of US Government-owned NTIS applications to prevent clashes with ongoing US granted patent numbers. For further information please visit the Derwent web site at www.derwent.com/dwpi/updates/ntis_us.html.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Fig 1B; 73pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Theologis A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USN7579896-N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                           zucchini; courgette; ACC synthase; conserved peptide;
1-aminocyclopropane-1-carboxylic acid synthase;
delayed fruit ripening; transgenic plant; ss.
                                                                                                                                                                                                                                                                        8701/c
AAV15701 standard; cDNA; 1703
                                                                                                                                                                                                                                                                                                                                                1254 CAAACTCGAAACCAACCTGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1703 BP; 481 A; 359 C; 378 G; 485 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (USDA ) US SEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-SEP-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-SEP-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12-NOV-1991.
                                                      CDS
                                                                                                                                                                                                                 01-JUN-1998
US5723766-A
                                                                                                Cucurbita
                                                                                                                                                                                      Zucchini ACC
                                                                                                                                                                                                                                              AAV15701
                                                                                                                                                                                                                                                                                                                                                               1 CANANNCKRAASMANCCNRSYTC 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        encoding ACC synthase - used for control of plant development for prodn. of ACC synthase, ethylene and ethanol \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1991-368895/50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAR15504
                                                                                                pepo
                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                     synthase clone
                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /EC_number=
1683..1688
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        90US-0579896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90US-0579896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11 .1492
/*tag= a
                                                         11..1492
                           /product= ACC_synthase
                                        /*tag=
                                                                   Socation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGRICULTURE
                                                                                                                                                                                                                                                                                                                                                                                                                    66.1%;
47.8%;
                                                                                                                                                                                                                                                                                                                                                                                                     Score 15.2; Db ...
nrad. No. 3.2e+02;
nrad. No. 3.5e+05;
                                                                                                                                                                                                                                                                                                                                                                                                        7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.4.1.14
                                                                                                                                                                                      pACC1
                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                         clone pACC1;
                                                                                                                                                                                                                                                                                                                                                                                                                                      1703;
                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps .
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B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence is the zucchini
1-aminocyclopropane-1-carboxylic acid (ACC) synthase clone pACC1.
pACC1 was used in the isolation of conserved sequences from five tomato (LE-ACC 1A, LE-ACC 1B, LE-ACC 2, LE-ACC3 and LE-ACC4) and two zucchini (CP-ACC 1A) and CP-ACC 1B) ACC synthases.
A novel DNA molecule comprises an expression system which, when contained in a plant host cell, generates RNA that is sufficiently complementary to an RNA transcript of an endogenous ACC synthase gene to prevent its synthesis. The expression system consists of the reverse transcript of the antisense RNA (i.e. cDNA) operably linked to control sequences that effect its transcription into the antisense RNA, where the cDNA can be amplified from the endogenous ACC synthase gene by primer pairs encoding conserved ACC synthase sequences. The DNA molecule can be used to delay ripening of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-SEP-1990;
25-JAN-1995;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                             1254 CANACTOGANICCANCCTGGCTC 1232
   25-JAN-1995;
                                                                                                                                                          Cucurbita pepo.
                                                                                                                                                                                    Zucchini; 1-amino@yclopropane-1-carboxylic acid synthase; pACC1; ethylene production; fruit ripening; transgenic plant; ss.
                                                                                                                                                                                                                               Zucchini 1-aminoc/clopropane-1-carboxylic acid synthase (pACC1) cDNA
                                                                                                                                                                                                                                                            04-JUL-2001 (f..rst entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1703 B?; 481 A; 359 C; 378 G; 485 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; Columis 33-38; 91pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA encoding anti-sense RNA blocking plant ACC synthase expression is used for producing transgenic plants with delayed fruit ripening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-2060(5/18.
P-PSDB; AAW47310!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sato T,
                           27-MAR-2001.
                                                       US6207881-B1.
                                                                                                                                                                                                                                                                                                                     AAD04541 standa::di cDNA; 1703 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (USDA ) US SEC OF AGRIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-APR-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         03-MAR-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tomato or zucchini fruits.
                                                                                                                                                                                                                                                                                                                                                                                                                        1 CANANNCKRAASMANCCNRSYTC 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 47.8
ll; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Theologis A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92US-0862493.
90US-0579896.
95US-0378313.
95US-0481171.
55US-0378313.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95US-0481171.
                                                                                 /product= "Zucchini pACC1"
                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                66.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 15.2;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 19;
:.2e+02;
les 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1703;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                          25-JAN-1995;
02-APR-1992;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence is a cDNA encoding zucchini (Cucurbita pepo)
1-aminocyclopropene-1-carboxylic acid synthase (pACC1). ACC synthase are capable of catalysing the conversion of AdoMet (S-adenosyl methionine) to ACC and methyl thioadenosine (MTA). ACC DNA is useful for producing ACC synthase which is essential for the production of ethylene in higher plants, where ethylene is a determinant of fruit ripening. The ACC DNA is also useful for producing transgenic plants which are overproducers of or are deficient in ACC synthase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1254 CAAACTCGAAACCAACCTGGCTC 1232
                                                                                                                                                                                                                 02-MAR-1998;
                                                                                                                                                                                                                                                                                                                    Cucurbita pepo.
                                                                                                                                                                                                                                                                                                                                                       ACC synthase; 1-aminocyclopropane-1-carboxylic acid synthase; ethylene production; fruit ripening; enzyme; zucchini; ss.
                                                                                                                                                                                                                                                                                                                                                                                                            Zucchini ACC synthase clone pACC1 coding sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF23618;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1703 BP; 481 A; 359 C; 378 G; 485 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Fig 1B; 92pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel isolated DNA molecule encoding 1-aminocyclopropane-1-carboxylic acid synthase, LE-ACC2 useful for producing ACC synthase which is essential for the production of ethylene in higher plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB; AAE00980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (USDA ) US SEC OF AGRIC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-APR-1992;
10-SEP-1990;
WPI; 2001-079558/09.
P-PSDB; AAB59716.
                                                                                        (USDA ) US DEPT OF AGRICULTURE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF23618 standard; DNA; 1703 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CANANNCKRAASMANCCNRSYTC 23
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d Similarity 47.8
                                                  Theologis A;
                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                       95US-0378313.
92US-0862493.
95US-0481171.
90US-0579896.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92US-0862493
90US-0579896
                                                                                                                                                                                                               9808-0033349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66.1%;
47.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 15.2; DB 22;
Pred. No. 3.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 22; Length 1703;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
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Expression cassette for producing transgenic plants exhibiting inhibited ethylene production and delayed fruit ripening, comprises complementary RNA which inhibits 1-aminocyclopropane-1-carboxyllc as

synthase synthesis

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RESULT 15
AAX27501/c
ID AAX27
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The invention relates to two isolated cDNA molecules ((pASC6) and (pACOS7)) encoding 1-aminocyclopropane-1-carboxylic acid synthase (ACS) and an ethylene forming enzyme (EFE), respectively. The clones are deposited under the Accession Numbers NCIMB 40813 and NCIMB 40814, respectively. pASC6 and pACOS7 may be used to genetically control ethylene biosynthesis in plants and hence regulate the ethylene-induced processes involved in fruit ripening (and other ethylene related processes). Vectors comprising the cDNA sequences may be used to produce transgenic bananas with altered fruit ripening characteristics. The orientation of the pASC6 and pACOS7 used in the construct, will determine how the ripening process is affected. If the genes have a sense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1501/c
AAX27501 standard; cDNA; 1712
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                                                                                                                                                                                                                                                                                                                                                                                                                   Novel isolated cDNA molecules ((pASC6) and (pACOS7)) encoding 1-aminocyclopropane-1-carboxylic acid synthase (ACS) and an efforming enzyme (EFE) - useful for modifying fruit ripening characteristics, especially in bananas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US5886164-A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ZENE ) ZENECA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           66.1%;
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Pred. No. 3.2e+02;
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                                                                                   Query Match
Best Local
                                                                                                                                                                   orientation, and transcribe mRNA that encodes an active enzyme, the rate of ripening will be increased (up-regulation) (however, full-length sense constructs can also be used to inhibit enzyme expression by coinhibition). If genes encode antisense mRNA, they will inhibit the expression of the genes involved in fruit ripening and hence slow the process down (down-regulation). In this manner different spatial and temporal patterns of genes expression can be produced. Retardation of the rate of ripening will reduce the rate of deterioration of banana fruit after harvest. This helps in production of high quality fruit that has improved flavour and texture. The present sequence represents the cDNA sequence of the banana ACS enzyme.
 1265
                                                                                                                                      Sequence 1712
                                 1 CANANNCKRAASMANCCNRSYTC
CACACCCTGAACCACCCCGGCTC 1243
                                                                   l Similarity 47.1
                                                                                                                                           BP;
                                                                                                                                           397 A; 459 C;
                                                                                     66.1%;
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                                                                                         Score 15.2; DB 20
Pred. No. 3.2e+02
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Search completed: March 10, Job time: 173.5 secs

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GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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Maximum DB seq length; 200000000
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23
1 ggm/tnccnggnttymgnrtngg
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Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| SOURCE SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL FEATURES | AROSO170 LOCUS DEFINITION ACCESSION VERSION | | 45 | ω, | 4 4 2 1 | 40 | ιω 0 80 | 37 | ωü | w w A w |) W (| 30 | 29 | 27 | 25 | 24 | 2 2 2 | 21 | 19 | 18 | 16 | 15 | נו נ | 12 | 10 | ်ဖွ | 8 7 | σ ι | J 42 | . ω | 21 | Result No. |
|--|---|------------|--|----------|------------|----------------------|--------------------|----------|----------|------------|--|-------------------|----------------------|--------------------|----------|----------|--------------|---|-------------|-----------------------|-----------|--------------------|----------|--------|--------------------|--|--------------------|--|--------------------|------|--------------|---------------------|
| Unkno Unkno Uncla Uncla 1 (b Ranu, 1-ami Paten | AR05017 Sequence AR05017 AR05017 | | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 15.4 | Score |
| nknown. nknown. nknown. classified (bases 1 nu,R.S. aminocyclo; tent: US 5 | 0170 ence 9 0170 0170.1 | | | ٠ | ٠.٦ | | ٠.٠. | ~ .~ | | ٦.` | | " | | | 77 | 7 | 77 | 7 | 1 7 | 7 | 1 ~1 | ~ | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 67.0 67.0 | % Query Match |
| to 23 propa 82487 | from pa GI:597 | | 1096 | 1094 | 1089 | 1089 | 1080 | 1054 | 1041 | 1025 | 1008 | 968 | 960 961 | 956 | 940 | 779 | 743 757 | 735 | 721 | 318 | 314 | 308 | 308 | 273 | 271 | 271 | 268 | 268 | 2 A G | 221 | 219 | Length |
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| -carboxylate synthase 9 20-0CT-1998; lifiers | 23 bp DNA nt US 5824875. | ALIGNMENTS | MIU22523 | AF518327 | CAACC1 | AB021907 AF083815 | AF401757 | AB015494 | AF074928 | CSU59813 | U54789 | AR135347 | AF074930 AR135348 | | AF074931 | TAU35778 | ACU86865 | AF048753 OSACCASS | | AF090351 FSY420186 | FSY420187 | LEACSIB1 | LEACS1A1 | PSACS2 | ECB | AF146025 | WOOD | 00 | 572 | 805 | AR050170 | |
| genes from pelargonium | linear PAT 29-SEP-1999 | | U73815 Malus domes U22523 Mangifera i | Populu | .anı | Musa a | AF401757 Annona ch | Passif | Sinapis | ucumis sa | AR093264 Sequence U54789 Helianthus | AR135347 Sequence | Sinapi | AF053355 Phaseolus | Sinapi | riticum | ctinid | AF048753 Citrus X Z27242 O.sativa (P | усорет У | Strig | Fagus | U74460 Lycopersico | ycopers | γcc | M83320 Lycopersico | ABUU5/22 Actinidia AF146025 Actinidia | M83318 Lycopersico | AF14602/ Actinidia AF146026 Actinidia | AB005723 Actinidia | 4 | Sequer | cription |

| REFERENCE 1 (bases 1 to 23) AUTHORS Ranu, R.S. | ERSION AR050170.1 GI:5972162 KEYWORDS Unknown. ORGANISM Unknown. | ACCESSION AR050170 23 bp DNA linear PAT 29-SEF ACCESSION AR050170 |
|---|--|--|
| 1 (bases 1 to 23) Ranu,R.S. 1-aminocyclopropane-1-carboxylate synthase genes from pelargonium Patent: US 5824875-A 9 20-OCT-1998; | | PAT 29-SEP-1999 |

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REFERENCE
AUTHORS
TITLE
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Yip,W.K., Moore,T. and Yang,S.F.
Differential accumulation of transcripts for four tomato
1-aminocyclopropane-1-carboxylate synthase homologs under various
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Asteridae; euasterids I; Solanales; Solanaceae; Solanum;
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1-aminocyclopropane-1-carboxylate synthase; homoloc
Lycopersicon esculentum ripe pericarp cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lycopersicon esculentum 1-aminocyclopropane-1-carboxylate homologue
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                                                                                           LEU18058
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                                                                                                                                                                                                                                                                            /product="1-aminocyclopropane-1-carboxylate synthase"
/protein_id="AAA68623.1"
/db_xref="G::867993"
/tanslation="EHNHLYCDEIYAATVFNPPKFVSIAEIINEDNCINKDLVHIVS
SLSKDLGFPGFRVGIVYSFNDDVVNCARK"
3 C 41 g 73 t
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2 c 7 g
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/db_xref="taxon:4081"
/tissue_type="pericarp"
/dev_stage="ripe"
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                                                                                                                                                                                                                                                                                                                                                                         note="homologue"
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                                                                  DNA,
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             esculentum
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Pred. No. 2.1e+03;
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Best Local Similarity
Matches 13; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (01-DEC-1994) Athanasios Theologis, Plant Gene Expression Center, ARS/USDA, 800 Buchanan Street, Albany, CA 94710 and Department of Plant Biology, University of California, Berkeley, CA 94720, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kawakita,K., Hennig,L., Lincoln,J.E., Rottmann,W.H., Campbel Zarembinski,T.I., Yu,G.X., Taylor,L.D. and Theologis,A. The tomato 1-aminocyclopropane-1-carboxylate (ACC) synthase manufacture family is encoded by at least eight members
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Asteridae; euasterids I; Solanales; Solanaceae; Solanum;
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Direct Subm
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                                                                                                                                                                            AB005723.1 GI:2274792
ACC synthase.
Actinidia deliciosa (sub_species:deliciosa, strain:Hayward)
wound-treated fruit cDNA to mRNA.
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   Cloning and expression of genes Acta Horticulturae 398, 179-186 2 (bases 1 to 265) Ikoma, Y.
                                                                                                        Eukaryota; Viridiplantae; Streptophyta; Embryo
Spermatophyta; Magnoliophyta; eudicotyledons;
Asteridae; Ericales; Actinidiaceae; Actinidia
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/note="direct precursor of ethylene; one member of a multigene family; from TZ region to the reaction center; similar to the product encoded by PIR Accession Number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="AGC synthase"
/protein_id="AAB48947.1"
/db_xref="G::1561702"
/tanslation="ILITFAMTKNIHIVSDEIYAGTVFDSPKEVSIIEALIDRKLEKS
KMWNOYHIVSSLSKDLGLPGFRVGMIYSN"
41 c 40 g 61 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /function="converts SAM to ACC; plant hormone biosynthesis"
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<1. .>221
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/EC_number="4.4.1.14"
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/cultivar="Rutgers"
/db_xref="taxon:4081"
/clone="PSF31 (stock #394)"
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                                                                         Yano, M. and Ogawa, K.
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56.5%;
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edons; core eudicots;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
Submittee (27-APR-1999) Department of Horticulture, Hisbands and Mission Campus, Zhéjiang University, Kaixuanlu 268, Hangzhou, 310029, Fecple's Republic of China
Lication/Qualifiers
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Submitted (11-JUI-1997) Yoshinori Ikoma, National Institute of Fruit Thee Science, Department of Citriculture; Okitsu, Shimizu, Shizuoka 424-02, Japan (E-mail.yoshino@okt.affrc.go.jp, Tel:+81-543-69-7111, Fax:+81-543-69-2115)
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Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Aggnoliophyta; eudicotyledons; core eudicots;
Asteridae; Ericales; Actinidiaceae; Actinidia.
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Xu,C., Chen,K., Chen,D. and Zhang,S.
Molecular cloning of four members of ACC synthase gene family from
kiwifruit (Actinidia chinensis Planch.)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished
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<1. .>265
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                                                                                                                                                                                                                                                                                                                                                                                                                    /note="ACS2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Actinidia chinensis Planch"
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Score 15.4; DB 8;
Pred. No. 1.6e+03;
                                   DB 8;
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AF146026
                                                                         1-aminocyclopropane-1-carboxylate synthase; homologue.
Lycopersicon esculentum red ripe fruit pericarp cDNa Lycopersicon esculentum
Lycopersicon esculentum
Lycopersicon esculentum
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnonlophyta; eudicotyledons; core eudicots;
Asteridae; euasterids I; Solanales; Solanaceae; Solanum;
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Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Asteridae; Ericales; Actinidiaceae; Actinidia.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Xu.C., Chen.D., Chen.K. and Zhang.S.
Direct Submission
Submitted (27-APR-1999) Department of Horticulture, Huajiachi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xu,C., Chen,K., Chen,D. and Zhang,S.
Molecular cloning of four members of ACC synthase gene family from
Kiwifruit (Actinidia chinensis Planch.)
Yip,W.K., Moore,T. and Yang,S.F.
Differential accumulation of transcripts for four tomato
                                                                                                                                                                                                      M83318.1 GI:170505
                                                                                                                                                                                                                         M83318
                                                                                                                                                                                                                                        Lycopersicon esculentum l-aminocyclopropane-l-carboxylate homologue mRNA, partial cds.
                                                                                                                                                                                                                                                                                     TOMACCA
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                                                      Lycopersicon
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              (bases 1 to 268)
p,W.K., Moore,T.
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/Godon_start=3
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KDSSHSTEVMNRVHIVYSLSKDIGLPGFRVGAIYSNDDVVAAAT"
82 C 58 g 65 t
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/db_xref="taxon:3625"
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Pred. No. 1.6e+03;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (11-JUL-1997) Yoshinori Ikoma, National Institute Fruit Tree Science, Department of Citriculture; Okitsu, Shinuoka 424-02, Japan (B-mail:yoshinoéokt.affrc.go.jp, Tel:+81-543-69-7111, Fax:+81-543-69-2115)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ikoma,Y., Yano,M. and Ogawa,K. Cloning and expression of genes encoding ACC synthase Acta Horticulturae 398, 179-186 (1995)
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Actinidia deliciosa
Actinidia deliciosa
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Eukaryota; Varidiplantae; Streptophyta; endicoryledons; core endicots;
Spermatophyta; Magnollophyta; endicoryledons; core endicots;
Asteridae; Ericales; Actinidiaceae; Actinidia.
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Actinidia deliciosa mRNA
AB005722
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Proc. Natl. Acad. Sci. U.S.A. 89 (6), 2475-2479 (1992)
92196141
1549612
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ACC synthase.
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/tanslation="TLTRPELNLLLTFITSKNIHLISDEIYSGTVFSSPDFVSIMEFL
/translation="TLTRPELNLLLTFITSKNIHLISDEIYSGTVFSSPDFVSIMEFL
KDSSHSTEVWNRVHIVYSLSKDLGLPGFRVGAIYSNDDVVLAAAKK"
a 82 c 56 g 66 t
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/db_xref="taxon:4081"
/tissue_type="pericarp"
/dev_stage="red_ripe_fruit"
                                                                                                                                                                                                                                                                                                                                                                                        /organism="Actinidia deliciosa"
/strain="Hayward"
/sub_species="deliciosa"
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/note="homologue"
                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:3627"
/tissue_type="ethylene-treated fruit"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=2
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4; Mismatches
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                        GGTCTCCCAGGTTTCCGGGTCGG
                                                                                                                                         Lycopersicon esculentum 1-aminocyclopropane-carboxylate homologue mRNA, partial cds.
M83320
M83320.1 GI:170508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
Direct Submission
Submitted (27-APR-1999) Department of Horticulture, Huajiachi
Submitted (27-APR-1999) Appartment of Horticulture, Huajiachi
Samons, Zhejiang University, Kaixuanlu 268, Hangzhou, Zhejiang
                                  1-aminocyclopropane-1-carboxylate synthase; homologue.
Lycopersicon esculentum calyx cDNA to mRNA.
Lycopersicon esculentum
Lycopersicon esculentum
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Asteridae; euasterids I; Solanales; Solanaceae; Solanum;
                                                                                                                                                                                                                                                                                                                                                                                                 l Similarity
13; Conserv
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AF146025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Campus, Zhejiang University, Kaixua 310029, People's Republic of China
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Xu,C., Chen,K., Chen,D. and Zhang,S. Molecular cloning of four members of ACC kiwifruit (Actinidia chinensis Planch.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; Ericales; Actinidiaceae; Actinidia.

1. (bases 1 to 271)
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Actinidia chinensis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished
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                    Lycopersicon
(bases 1 to 271)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=3
/product="1-aninocyclopropane-1-carboxylate synthase 1A"
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/proteain_id="Anino0560.1"
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/translation="TLTRPELIALLITETTSKNIHLISDETYSGTVFSSPNFVSIMEVL
KDSSHSTEVWNGVHIYVSLSKOLGLIPGFRVGAIYSNDDVVVAAAS"
84 c 55 9 65 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Actinidla chinensis"
/db_xref="taxon:3625"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="ACS1A"
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L.6e+03;
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On Jun :
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M83322
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1549612
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Oetiker J.H., Olson.D.C., Shiu,O.Y. and Yang,S.F.
Differential induction of seven 1-aminocyclopropane-1-carboxylate
synthase genes by elicitor in suspension cultures of tomato
(Lycopersicon esculentum)
Plant Mol. Biol. 34 (2), 275-286 (1997)
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Yip,W.K., Moore,T. and Yang,S.F.
Differential accumulation of transcripts for four tomato
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Proc. Natl. Acad. Sci. U.S.A. 89 (6), 2475-2479 (1992)
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Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
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Spermatophyta; Magnoliophyta; eudicotyledons;
Spermatophyta; Magnoliophyta; Solanaceae; Solanum;
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Differential accumulation of transcripts for four tomato
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//protein_id="AAA68622.1"
//db_xref="61:867991"
/translation="LURNELEILLTPVDEKGIHLISDEIYSGTVFNSPGEVSVMEVLIEKUNMETRVHEVYSLGKDIGLPGFRIGAIYSNDEMVVSAATK"
a | 62 c 55 g 76 t
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<1. .>271
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                                                          /tissue_type="calyx"
<1, .>271
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/db_xref="taxon:4081"
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/note="homologue"
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                /EC_number="4.4.1.14"
/note="homclogue"
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205 GGATTCCCGGGGTTTAGAGTTGG 227
                                                                 1 GGNYTNCCNGGNTTYMGNRTNGG 23
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Submitted (01-DEC-1994) S.C. Peck, Michigan State University, I
of Energy Plant Research Lab, MSU-DOB Plant Research Lab, East
Lansing, MI 48823, CANADA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peck, S.C. and Kendé, H. Sequential induction of the ethylene biosynthetic enzymes by Indole-3-acetic acid in etiolated peas plant Mol. Biol. 28 (2), 293-301 (1995) 95322591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    / (bases 1 to 273)
Peck, S.C.
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/translation="MSRNELNILITFEAMTKNIHIVSDEIYAGTVEDSPKFVSIIEALI
DRKLEKSKMWNQVHIVSSISKDIGLEGFRVGMIYSNNETLIAAATK"
a 56 c 48 g 70 t
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/Codon_Start=1
/Codon_Start=1
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1 EHDTDIECDRNLVHIVYSLSKVMGFPGFRVGIIYSYNDTVVDCTRK"
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<1. .>273
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/EC_number="4.4.1.14"
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/cultivar="Alaska"
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Pred. No. 1.6e+03;
                                                                                                                                           Score 15.4; DB 8;
Pred. No. 1.6e+03;
4; Mismatches 6;
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Lycopersicon esculentum
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; eudicotyledons; core eudicots;
Asteridae; euasterids I; Solanales; Solanaceae; Solanum;
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                                                                                                                                                                                                                                                         Lycopersicon esculentum 1-aminocyclopropane-1-carboxylate synthase (LE-ACS1B) mRNA, partial cds. U74460
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Oetiker, J.H., Olson, D.C., Shiu, O.Y. and Yang, S.F.
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97351561
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Oetiker, J.H., Olson, D.C., Shiu, O.Y. and Yang, S.F. Differential induction of seven 1-aminocyclopropane-1-carboxylate
                                                                                Lycopersicon esculentum Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Ewkaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids I; Solanales; Solanaceae; Solanum;
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Plant Mol. Biol. 34 (2), 275–286 (1997)
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Plant Mol. Biol. 34 (2), 275-286 (1997)
97351561
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Differential induction of seven 1-aminocyclopropane-1-carboxylate
synthase genes by elicitor in suspension cultures of tomato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (25-SEP-1996) Vegetable at Davis, Mann Laboratory, Davis,
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Oetiker, J.H., Olson
                                                                                                                          Direct Submission Submitted (25-SEP-1996) Vegetable Crops, University at Davis, Mann Laboratory, Davis, CA 95616, USA
                                                                                                                                                                                Oetiker, J.H., Olson, D.C.,
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score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| SOURCE SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL FEATURES | RESULT 1 AR050171 LOCUS DEFINITION ACCESSION VERSION VERSION | | c 43 15 c 44 15 c 45 15 | 410 | 398 | 36 | υ ω u υ 4- π | 32 | 30 | 28 | 26 | 1.4-3 | 21 1 | 20 1 | 18 1 | 16 1 | 143 | 12 | 10 1 | 9 0 | 0 7 0 | ი თ | . 4- 0 | 221 | Sc |
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| -carboxylate synthase on 20-oct-1998; | 23 bp DNA nt US 5824875. | ALIGNMENTS | AF332404 AF332481 CPA277161 | AF332391 AF334720 | AF334712 LEU17972 | CPA277160 | AF3324UD VIRACCSYNT VRACCSYN5 | MSBACS2GE | VRACCSYN4 AF332390 | AF239663 | AF178077 AF178076 AF177760 | AF184077 PHU17231 | D86241 AF144746 | AF338652 D37937 | VRACCSYN AY120899 | AF184078 | AF 239989 CPA012577 | AF239987 | ATU79524 STU70842 | AF467782 | MDU73815 | AY061946 CAACC1 | AF184076 | AR050171 MSU87152 AF049138 | Ð |
| genes from pelargonium | linear PAT 29-SEP-1999 | | F332404 Arabidops 23481 Arabidops J277161 Carica | 82391 Arabi 84720 Arabi | 34712 Ara | 77160 Car | o Arabidop Vigna radi V radiata | 947 Musa | 135 V.radiata 9 12390 Arabidops | 39663 Prunus | 7807/ Carica 78076 Carica | 34077 Prunus 231 Pelargoni | 14746 Solanı | 38652 Brassica 337 Cucumis me | 20899 Betula | 34078 Prunus a | 12577 Carica | 19987 Prunus | 524 Arak 342 Sole | 7782 Prunus | 315 Malus do | 265 | 34076 Prunu | R050171 Sequenc 87152 Musa acum E049138 Diantho | escription |

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Spermatophyta; Magnoliophyta; Liliopsida; Zingiberales; Musaceae;
Dianthus caryophyllus.
Dianthus caryophyllus
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                                               AF049138.1 GI:2947285
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SQTQHLLASMLGDEEFTTSFLATSRTGCAARRVFTDGLKRVGIHCLDGNAGLFCWMDL
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/strain≈"AAA group, cavendish"
/db_xref="taxon:4641"
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Mbeguile-A-Mbeguile,D. and Fils-Lycaon,B.R.
Direct Submission
Submitted (07-SEP-1999) Station de Technologie des Produits
Vegetaux, Institut National de la Recherche Agronomique,
Pagroparc-Domaine Saint Paul, Avignon 84914, France
Location/Qualifiers
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Submitted (17-FEB-1998)
Purdue University, 1165
                                                                                                                                                                                                                                         ACC synthase from apricot fruit Unpublished
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Differential expression of three members of the ACC synthase gene
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GELTLWRVIINEVKINVSPGSSFHCTEPGWFRVCIANMSNDTMEVALRRIRSFVLRIK
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2 (bases | to 1089)
2 (bases | to 1089)
Lei.C., Yan, M. and Junping, G.
Direct Submission
Submitted (06-Nov-2001) Ornamental Horticulture and Landscape
Architec Jure, China Agriculture University, No.2 Yuanmingyuan
Road, Beljing 100094, China
Location/Qualifiers
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Rosa hybrid cultivar 'Kardinal'.
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
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AY061946
AY061946.1 GI:20372647
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/cultivar="Kardinal"
/db_xref="taxon:180465"
/tissue_type="petals"
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/gene="ACS1"
/product="ACC synthase"
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/gene="ACS1"
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/translation="DartyPreyPoliDkDIKWRTGVEIITVPCRSADKFNLSVTALD
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U73815 GI:1658059
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Capsicum annuum.
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae, euasterids I; Solanales; Solanaccae; Capsicum.

1 (bases 1 to 1089)
Harpster,M.H., Howie,W. and Dunsmiur,P.
Unpublished
2 (bases 1 to 1089)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (20-00T-1994) M.H. Harpster, DNA Plant Technology Corporation, 6701 San Pablo Avenue, Oakland, California 94608, USA
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/clone="pBetaD1-2"
/cell_line="VS-300"
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/cultivar="VS-300"
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47.8%;
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                                                                                                                                                      Score 15.2; DB 8;
Pred. No. 1.4e+03;
7; Mismatches 5;
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Pred. No. 1.4e+03;
7; Mismatches 5;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Malus x domestica.

Malus x domestica

Malus x domestica

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Eukaryota; Wagnoliophyta; eudicotyledons; core eudicots;

Spermatophyta; Magnoliophyta; Rosaceae; Maloideae; Malus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (09-OCT-1996) Food Science & Technology, Cornell University, NYSAES, Geneva, NY 14456, USA
                                                                                                                 Botella, J.R.
Ethylene evolution
of mango fruits
                                                                                                                                                                                          Mangifera indica
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; eurosids II; Sapindales; Anacardiaceae; Mangifera.
                                                                                                                                                                                                                                                                                                                                     partial cds
U22523
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11; Conser
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Botella,J.R.

Direct Submission

Submitted (14-MAR-1995) Jose R. Botella, Botany Department,
University of Queensland, John Hines Building, Brisbane, Qu
                                                                                                                                                                                                                                                                                                                U22523.1 GI:1143811
                                                                                                                                                                                                                                                                                                                                                                     Mangifera indica 1-aminocyclopropane-carboxylate
                                                                                             Unpublished
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product="ACC synthase"
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FVENFIAKSAMKLSQRHDLFTNGLGQVEITTLKSNAGLFINMDLRRFLENSTFDDELK
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/codon_start=1
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<1. .>1094
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171 c 229 g 337 t
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/strain="McIntosh"
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Pred. No. 1.4e+03;
7; Mismatches 5;
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                                                                                                                                      synthase gene expression during ripening
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synthase mRNA,
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                                                                                                                                                                                                                                                                          Direct Submission
Direct Submission
Submitted (15-JAN-2002) Institute of Biochemistry, Zhejiang
Submitted (15-JAN-2002) Institute of Biochemistry, Zhejiang
Province 310029,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Rosales; Rosaceae; Amygdaloideae; Prunus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prunus persica ACC synthase mRNA, AF467782
                                                                                                                                                                                                                                                                    University, Kaixuan
P. R. China
                                                                                                                                                                                                                                                                                                                                           Yongfeng,J.
                                                                                                                                                                                                                                                                                                                                                                           Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                Cloning and expression of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prunus
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VEKFLAESSKRLAKRYHIFTKRLEKVGINCLKGNAGLFFWMDLRHLLQQETVDAEMKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="fruit"
/dev_stage="mature"
<1. .>1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /strain="Kensington Rc/db_xref="taxon:29780"/clone="pMIA-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WGTILNDVKLNVSPGSSFHCQEPGWFRVCFA"
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YYQHFTRDLGWRTGVQIVPVDCDSSNNFQITKEALAAAYEKAQKNNISVKGLIITNPS
NPLGTTLGRDTLESLVEFISQKNIHLVCDEIYAATVFSSPTFTCISEVLONTDCNPNL
IHIVYSLSKDMGLPGLRVGIYYSYNDDVNIGRKMSSFGLVSSOTGHVLASMLLDEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=
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/note="ACC synthase"
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                                                                                                                                                                                          /organism="Prunus persica"
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                                                                                                                                                                                                                                  1. .1097
                                                                                                                                                                                                                                                   Location/Qualifiers
VARFLETSSKRLAKRHGVFTKGLEEVGINCLRSNAGLFCWMDLRRLLKDLTFDGEMVI
                                                                                                                                                            /codon_start=1
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47.8%;
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Pred. No. 1
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.4e+03;
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RESULT 11
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AUTHORS
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ATU79524/c
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                                                                                                                                                                                                                                                              Local
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                STU70842 1098 bp mRNA linear PLN 17-J. Solanum (Luberosum 1-aminocyclopropane-1-carboxylate synthase (STACES) mRNA, partial cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (25-NOV-1996) Plant Biology, University of Helsinki, P.O. Box 28 (Viikki 21), Helsinki 00014, Finland Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidop (bases I to 1093)
Vahala, J., Schlagnhaufer, C.D. and Pell, E.J.
Induction of an ACC synthase cDNA by ozone in light-grown Arabidopsis thatiana leaves
Physiol. Flantarum 103, 45-50 (1998)
2 (bases I to 1098)
U70842.1 (iI:2459544
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Arabidorsis thaliana 1-aminocyclopropane-1-carboxylate synthase
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Spermatcphyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
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192 c 280 g 331 t
                                                                                                                                                                                                                                                                                                                                                                      /product="1-aminocyclopropane-1-carboxylate synthase"
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/db_xref="taxon:3702"
<11. .>1008
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265 c 294 g 264 t
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47.8%; Pred. No. ...
47.8% 7; Mismatches
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Solanum tuberosum
Solanum tuberosum
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Asteridae; euasterids I; Solanales; Solanaceae; Solanum.

1 (bases 1 to 1098)
Schlagnhaufer,C.D., Arteca,R.N. and Pell,E.J.
Sequential expression of two 1-aminocyclopropane-1-carboxylate
Synthase genes in response to biotic and abiotic stresses in potato
(Solanum tuberosum L.) leaves
(Solanum tuberosum L.) leaves
(Solanum tuberosum L.) leaves
2 (bases 1 to 1100)
Jin,Y. and Zhang,Y.
Direct Submission
Submitted (26-FFB-2000) Institute of Biochemistry, Zhejiang
University, Kaixuan Road 268, Hangzhou, Zhejiang 310029, P.R. China
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prunus persica
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; eurosids I; Rosales; Rosaceae; Amygdaloideae; Prunus.
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                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 1100)
Jin, Y. and Zhang, Y.
                                                                                                                                                                                                                                                          Molecular cloning and expression of peach ACC synthase gene unpublished
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FVENETIAKSAMKLSORHDLFTKGLGOVGITTIKSNAGLFIWMDLRFFLENSTFDNELK
LWHIINKVKLNVSPGCSFLSSEGWFRVCFA*
1 169 c 226 g 341 t
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<1. .>1098
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Pred. No. 1.4e+03;
7; Mismatches 5;
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AF239989
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished 2 (bases 1
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FVDRETJAQSAKRLKARHMYLTMGLAQVGTSCLKSNGGLEVWMDLRQLLKEQTFEAEMA
LWHTIIHEVKLNVSPGSSFHCPEPGWFRVCFA"

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/translation="QMGLAENQLSFDMIVDWIRKHPBASICTPEGLERFKSIANFQDY
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/db_xref="taxon:3760"
<1. .>1100
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Pred. No. 1.4e+03;
7; Mismatches 5;
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Carica papaya mRNA for 1-aminocyclopropane-1-carboxylate synthase.
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Carica papaya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (04-NOY-1998) Lam P.F., Biotechnology Centre, Malaysian Agricultural Research and Development Institute, GPO Box 12301, 50774 Kuala Lumpur, MALAYSIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Carlcaceae; Carica.
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Lam, P.F., Tan, C.S. a
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                                                                               mRNA, partial cds.
Betula
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DLIHIIYSLSKOMGFPGFRVGIVYSYNDAVVSCARKMSSFGLVSSQTQYLIASMLADD
EFYDKFIVESRKRLAMRHSFFTQRLAQVGINCLKSNAGLFVMMDLRRLLKEQTFEAEM
VLWRVINEIKLNVSPGSPFHCSEBFGWFRVCF"
213 c 254 g 309 t
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YYPGFDRDLRWRTGVKLIFVVCESSNDYQITIEALEAYETAQEADIK/KGLLITNPS
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/EC_number="4.4.1.14"
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/cultivar="Eksotika 2"
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Pred. No. 1.
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Best Local Similarity 47.8
Matches 11; Conservative
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1091 CATACGCGGAACCAAGCCTC 1069
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1 (bases 1 to 1101)
Vahala, ..., Ruonala, R., Keinanen, M. unominen, H. and Kangasjarvi, J. Kinetics; dind signaling of ethylene, jasmonic acid and salicylic moculate ozone sensitivity in birch (Betula pendula)
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(bases: 1 to 1101)
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/'gene="ACC: synthase"
/'codon_start=1
/'codon_start=1
/'product="1-aminocyclopropane-1-carboxylate synthase"
//product="1-aminocyclopropane-1-carboxylate synthase"
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/'note="BP-ACS2"
<1. .>1101
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/db_xref="taxon:3505"
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Maximum Match 100%
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Perfect score:
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Maximum DB seq length: 2000000000
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AL1751692 Arabidops
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AU092777 AU092777
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ACCESSION VERSION RESULT 1 AZ309427/c LOCUS COMMENT REFERENCE SOURCE ORGANISM KEYWORDS DEFINITION TITLE AUTHORS JOURNAL 84112, Tel: 8 plasmid inserts
Unpublished (2000)
Contact: Robert B. Weiss
University of Utah Genome Center
University of Utah
Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 103)

Dunn,D., Aoyagi,A., Barber,M., Beacorn,T., Duval,B., Hamil,C., Islam,H., Longacre,S., Mahmoud,M., Meenen,E., Pedersen,T., Reilly,M., Rose,H., Stokes,R., Stokes,R., Tingey,A., von Niederhausern,A. and Wright,D.,Weiss,R. Tel: 801 585 5606 Fax: 801 585 7177 Email: ddunn@genet AZ309427 103 bp DNA linear GSS 29-SEP-200 1M0013K07R Mouse 10kb plasmid UUGC1M library Mus musculus genomic clone UUGC1M0013K07 R, DNA sequence. Email: ddunn@genetics.utah.edu Insert Length: 10000 Std Erro Mouse whole genome scaffolding with paired end reads from 10kb Mus musculus AZ309427.1 GI:10350398 nouse mouse USA GSS 29-SEP-2000

Std Error: 0.00

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RESULT 2
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NF009A03RT1F1019 Developing root Medicago truncatula
NF009A03RT 5', mRNA sequence.
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Seq primer: CACACAGGAAACAGCTATGACC
                                                                                                                                                       Medicago truncatula root library
Unpublished (2000)
On Apr 14, 2000 this sequence version replaced gi:7562116
                                                                                                                                                                                                                         Watson, B.S., Shin, H.-S., Lopez-Meyer, M., Scott, A.D., Harris, A.R., Gonzales, R.A., Bell, C.J., Flores, H.R., Inman, J.T., Weller, J.W., May, G.D. and Paiva, N.L.

Expressed Sequence Tags from the Samuel Roberts Noble Foundation
                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Fabales; Fabaceae; Papilionoideae; Trifolieae
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barrel medic.
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                                                                                        Plant Biology Division
The Samuel Roberts Noble
                      Tel: 580 221 7317 Fax: 580 221 7380
                                                                                                                                                                                                                                                                                                                                                   Medicago.
                                                                                                                                        Contact:
                                                                                                                                                                                                                                                                                                                           (bases 1 to 128)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      was hydrodynamically sheared by repeated passage through a 0.005 inch orifice at constant velocity. The sheared DNA was blunt end-repaired with T4 DNA polymerase and T4 polynucleotide kinase. Adaptor oligonucleotides were ligated to the blunt ends in high molar excess. The adaptored DNA was purified and size-selected for a 9.5 to 10.5 kb range using preparative agarose gel electrophoresis. Vector DNA was prepared from a derivative of pNAST (9114732114)ph AF129072.1), a copy-number inducible derivative of plasmid R1. The vector was ligated with adaptors complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to
                                                                    Sam Noble Parkway, Ardmore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
nlpaiva@noble.org
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           purified. The sheared, auaptored med into adaptored vector DNA, and transformed into chemically-competent E. coli XL10-Gold (Stratagene) cells and selected for ampicillin resistance."

a 41 c 21 g 25 t
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/clone="UUGC1M0013K07"
/clone_lib="Mouse 10kb plasmid UUGC1M library"
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/strain="C57BL/6J"
                                                                                                                                        Paiva
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56.5%;
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AL751692
AL751692.1 GI:21484190
GSS.
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                                                                                                                                                                                                                                                                                                                                                                                                                               ROSSO,M., Strizhov,N., Li,Y., Reiss,B., Dekker,K. and Wo
A new Arabidopsis thaliana T-DNA mutagenised population
for flanking sequence tag based reverse genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arabidopsis thaliana Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Aragnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                             Submitted (17-JUN-2002) Weisshaar B., Max-Planck-Institut fuer Submitted (17-JUN-2002) Weisshaar B., Max-Planck-Institut fuer Zuechtungsforschung, Carl-von-Linne-Weg 10, Koeln, 50829, Germany This sequence is recovered from the left border of the T-DNA. It indicates an insertion close to or within gene At3g61510. The sequences are generated at the MPI for Plant Breeding Research in the context of the GABI-Kat project. GABI-Kat is part of the German Plant Genomics program designated 'GABI'. Information on line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A pipeline for automated high-throughput generation of FSTs (flanking sequence tags) from Arabidopsis thaliana T-DNA
                                                                                                                                              plant Genomics program designated 'GABI'.
availability can be found at:
http://www.mpiz_koeln.mpg.de/GABI-Kat/.
                                                                                                                                                                                                                                                                                                                                                                3 (bases 1 to 198)
Strizhov,N., Li,Y., Rosso,M. and Weisshaar,B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and Weisshaar, B.
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note="Vector: Lambda Zap; Total RNA was extract non-nodulated roots of plants grown in 1 mM nitr medium. Samples were taken at four time points (approximately two days, one, two and six weeks germination) representing early seedling growth nitrogen limitation."

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/tissue_type="root"
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/db_xref="taxon:3702"
/clone="GK-006E12-014808"
/clone_lib="Arabidopsis thaliana T-DNA insertion lines"
                                                               /organism="Arabidopsis thaliana"
/strain="Columbia 0"
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lation (GABI-Kat)
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clone C53537, m
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AU092777
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12 Rue du General Zimmer, 67084 Strasbourg Cedex,France
Email: ARABANKeWEDCC.U-STRASBG.FR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Philipps G., Gigot C. Gigot Claude / L512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA sequence.
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                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                       /note="PCR was performed on DNA from Arabidopsis thaliana plants (T1) which were transformed with the T-DNA from rector pAC106. The lines contain one or more T-DNA from insertions. The DNA fragment(s) resulting from the PCR were directly sequenced to determine the genomic sequence flanking the insertion. Sequences displaying significant similarity to the A. thalaina nuclear genome sequence were processed for submission. T-DNA derived sequences were
                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Arabidopsis thaliana"
/strain="ecotype Columbia"
/db_xref="taxon:3702"
/clone="FAI88"
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                                          callus Oryza sativa (japonica cultivar-group) cDNA
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Pred. No. 1.8e+03;
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Pred. No. 1.6e+03;
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Oryza sativa (japonica cultivar-group)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                    Contact: Yasukazu Nakamura
The First Laboratory for Plant Gene Research
The Laboratory for Plant Gene Research
Kazusa DNA Research Institute
Yana 1532-3, Kisarazu, Chiba 292-0812, Japan
Yana 1532-3, Kisarazu, Chiba 292-0812, Japan
Email: ynakamu@kazusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/.
Location/Qualifiers
                                                                                                                                                                                                                                                                               Asamizu,E., Nakamura,Y., Sato,S. and Tabata,S. Generation of 7137 non-redundant expressed sequence tags from a Legume, Lotus japonicus DNA Res. 7 (2), 127-130 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                          Lotus japonicus
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; eurosids I; Fabales; Fabaceae; Papilionoideae; Loteae;
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AV410488
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Contact: Takuji Sasaki

Contact: Takuji Sasaki

National Institute of Agrobiological Resources

Rice Genome Research Program, Kannondai 2-1-2, Tsukuba, Ibaraki
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Tel: 81-298-38-7441
Fax: 81-298-38-7468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rice cDNA from
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Rice callus"
/note="Vector: pElluscript II SK+; Site_1: SalI; Site_2:
NotI; cDNA prepared from rice callus mRNAs by using
oligo(dT) as a primer and ligating to the SalI-NotI site
of pBluescript II SK+ phagemid. "
128 c 101 g 57 t 2 others
/organism="Lotus japonicus"
/db_xref="taxon:34305"
/clone="Whu1073ell_r"
/clone_lib="Lotus japonicus young plants (two-week old)"
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/cultivar="wipponbare"
/db_xref="raxon:39947"
/clone="C53537"
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56.5%;
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Pred. No. 1.9e+03;
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Alcala,J., Vrebalov,J., White,R., van der Hoeven,R.S., Holt,I.E., Liang,F. Hansen,T.S., Craven,M.B., Bowman,C.L., Ronning,C.M., Nierman,W., Fraser,C.M., Martin,G.B., Giovannoni,J.J. and Tanksley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lycopersicon esculentum Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids I; Solanales; Solanaceae; Solanum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF112525 431 bp mRNA linear EST 18-N EST440115 tomato breaker fruit Lycopersicon esculentum cDNA CLEG41J5 5' sequence, mRNA sequence.
AI898708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clemson University 100 Jordan Hall, Clemson, SC 29634, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (2000)
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BF112525.1 GI:10942215
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clemson University Genomics Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: CUG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Generation of ESTs from tomato fruit tissue, breaker stage
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                                                                                                                                                                                                                           /note="Vector: pBluescriptSKmCUadapt; Site_1: EcoR1; Site_2: XhoI; supplier: Boyce Thompson Institute; sequencing: The Institute for Genomic Research. Fruit were harvested at the breaker stage (first sign of lycopene accumulation on the blossom end of fruit). Fruit were cut in half and the seeds and locules were discarded prior to freezing the pericarp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:4081"
/clone="cLEG41J5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Lycopersicon esculentum"/cultivar="TA496"
                                                                                                                                                                                                                                                                                                                                                                /lab_host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="tomato breaker
/tissue_type="Pericarp"
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Pred. No. 1.
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Pred. No. 1.9e+03;
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les 6;
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Contact: CUGI
Clemson University Genomics Institute
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Alcala,J., Vrebalov,J., White,R., Matern,A.L., Vision,T., Holt,I.E., Liang,F., Upton,J., Ronning,C.M., Craven,M.B., Fujii,C.Y., Bowman,C.L., Nierman,W., Fraser,C.M., Venter,J.C., Martin,G.B., Tanksley,S.D. and Giovannoni,J.
Generation of ESTs from tomato carpel tissue
Generation of ESTs from tomato fruit tissue, immature green Unpublished (2000) Contact: CUGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clemson University
100 Jordan Hall, Clemson,
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AI898708.1 GI:5604610
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                                                                                     Alcala,J., Vrebalov,J., White,R., van Liang,F., Hansen,T.S., Craven,M.B., Bu Nierman,W., Fraser,C.M., Martin,G.B.,
                                                                                                                                                                                          Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids I; Solanales; Solanaceae; Solanum;
                                                                                                                                                                                                                                                            Lycopersicon esculentum
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                                                                                                                                                                                                                                                                                                                         BE458995.1 GI:9503297
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        respectively."
81 c
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/lab_host="XL1-Blue MRF'"
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/clone="cLED35K4"
/clone_ib="tomato ovary, TAMU"
/tissue_type="carpe1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Lycopersicon esculentum"
/cultivar="TA496"
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56.5%;
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Pred. No. 2e+03;
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                                                                                                                                White, R., van der Hoeven, R.S., Holt, I.E.,
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RESULT 10
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                                                                                                                                                                                                                                                                                                                                                                                           Contact: Thomas Newman
MSU-DOE Plant Research Laboratory
Michigan State University
MSU-DOE-PRL, Michigan State University,Plant Biology Bldg.,E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 479)
Newman, T., deBruijt, F.J., Green, P., Keegstra, K., Kende, H., McIntosh, L., Ohl: Ogge, J., Raikhel, N., Somerville, S., Thomashow, M., Retzel, E. and Somerville, C.
Genes ga. Ope: a summary of methods for accessing results from large-scale partial sequencing of anonymous Arabidopsis cDNA clones Plant Physiol. 106, 1241-1255 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsis thaliana
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermato-hyva; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; e.rosids II; Brassicales; Brassicaceae; Arabidopsis.
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Clemson University
100 Jordan Hall, Clemson, SC 29634, USA
Email: http://www.genome.clemson.edu/orders/index.html
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20683 Lambda-PRL2 Arabidopsis thaliana cDNA clone 240L12T7, mRNA
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                                                                                                                                                                                                                                                2:3;3tcn@ibm.cl.msu.edu
ime:: T7 dye primer.
Location/Qualifiers
/Grganism="Arabidopsis thaliana"
/straln="var columbia"
/straln="var columbia"
/straln="var columbia"
/db_xref="fexon:3702"
/dlone="240L12T7"
/clone="1240L12T7"
/clone="1240L12T7"
/clone="Vector: lambda Zip-Lox; Site_1: Sal; Site_2: Not;
/clote="Vector: lambda Zip-Lox; Site_1: Fal; Site_2: Not;
/clote="Vector: lambda Zip-Lox; Site_1: The mRNA Sources were 1) 7

dipy germinated etiolated seedlings; 2) tissue culture
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/tissue_type="fruit"
/dev_stage="immature green (5-35 days post-anthesis)"
/lab_host="SOLR"
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/clone="clem5013"
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/cultivar="TA496"
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56.5%;
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Pred. No. 2e+03;
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AUTHORS
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855 California Ave, Palo Alto, CA 94304, USA
Tel: 650 723 2227
Fax: 650 725 8221
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Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACC
clade; Panicoldeae; Andropogoneae; Zea.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: walbot@stanford.edu
Very probable ligation site of ends cut by single endonuclease.
Reverse complemented post-ligation sequence from source sequence.
Plate: 1008103 row: 5
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Contact: Walbot
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                                                                                                                                                               // Organism="Zea mays"
// Coultivar="mixed background W23/A188/B73"
// Colone_lib="look"
// Clone_lib="1008 - RescueMu Grid I"
// Clone_lib="1008 
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Location/Qualifiers
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sueMu Grid I Zea mays genomic, DNA
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Contact: David Smoller, Ph.D.
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30967 Lambda-PRL2 Arabidopsis
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Fax: 314-427-3324
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Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
                                       Newman,T., deBruijn,F.J., Green,P., Keegstra,K.,,L., Ohlrogge,J., Raikhel,N., Somerville,S., Tho
                                                                                                     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
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                  and Somerville, C
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/note="cDNA library was made from selected clones from the
Arabidopsis thaliana Ohio State clone set."
1 102 c 131 q 129 +
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56.5%;
summary of methods for accessing results from
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RESULT 14
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GA_Eb0026C04f Gossypium arboreum 7-10 dpa fiber library Gossypium
arboreum cDNA clone GA_Eb0026C04f, mRNA sequence.
BF276958
                                                                                                                                                                            Clemson University
100 Jordan Hall, C
                                                                                                                                                                                                                                                                                   ,D., Wood,T.C., Leslie,A. and Wilkins,T.A.
An integrated analysis of the genetics, development, and evolution of the cotton fiber
                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotys; core eudicots; Rosidae; eurosids II; Malvales; Malvaceae; Gossypium.

1 (bases 1 to 519)
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                                                                                                                                  Tel: 864 656 7288 Fax: 864 656 4293
                                                                                                                                                                                                                                              Contact: Wing RA
                                                                                                                                                                                                                                                                   Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                       Wing, R.A., Frisch, D., Yu, Y., Main, D., Rambo, T., Simmons, J., Henry
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                                                                                                                                                                                                                         Clemson University Genomics Institute
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Seq primer: T7 dye primer.
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primer: TAATACGACTCACTATAGGG
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                                                                   quality sequence stop: 514
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/note="vector: lambda Zip-Lox: Site_1: Sal: Site_2: Not;
/note="vector: lambda Zip-Lox: Site_1: Sal: Site_2: Not;
/note="vector: lambda Zip-Lox: Site_1! Sal: Site_2: Not;
/note="vector: lambda Zip-Lox: Site_2! Sal: Site_2: Not;
/note="vector: lambda Zip-Lox: Site_2! Sal: Site_2: Not;
/note="vector: lambda Zip-Lox: Sal: Site_2: Not;
/note="vector: lambda Zip-Lox: The cDNA inserts were directionally cloned with Sal-Not arms using oligo dT primed cDNA."

128 a 107 c 127 g 124 t 19 others
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/clone="288b2T7"
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/strain="var columbia"
/organism="Gossypium arboreum"
                                              Location/Qualifiers
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399 GGATTTCCAGGATTCAGAGTTGG 421
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(base) 1 to 521;

Alcala,J., Vrebalov,J., White,R., Matern,A.L., Vision,T., Holt,I.E.,
Liang,?., Upton,J., Ronning,C.M., Craven,M.B., Fujii,C.Y., Bowman,C.L., Nierman,W., Fraser,C.M., Venter,J.C., Martin,G.B., Tanksley,S.D. and Giovannoni,J.

Generation of ESTs from tomato carpel tissue
Unpublished (1999)
Contact: CJGI.

Contact: CJGI.
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Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Spermatophyta; Magnoliophyta; Solanaceae; Solanum;
Asteridae; euasterids I; Solanales; Solanaceae; Solanum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clemson University Genomics Institute
Clemson University
100 Jordan; Hall, Clemson, SC 29634, USA
Email: h:tp://www.genome.clemson.edu/orders/index.html
5 prime :equence.
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/cultivar="nA496"
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/clone="clbD35F22"
/clone="tomato ovary, TAMU"
/tissue_type="carpel"
/tissue_type="c
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/note="Vector: pBK-CMV; Site_1: EcoRI; Site_2: XhoI"
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ACCESSION VERSION KEYWORDS SOURCE FEATURES COMMENT REFERENCE DEFINITION AUTHORS TITLE MEDLINE ORGANISM JOURNAL source thale cress.
Arabidopsis thaliana
Arabidopsis thaliana
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; eudicotyledons; core eudicots;
Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
1 (bases 1 to 221)
Asamizu,E., Nakamura,Y., Sato,S. and Tabata,S.
A large scale analysis of cDNA in Arabidopsis thaliana: Generation of 12,028 non-redundant expressed sequence tags from normalized and size-selected cDNA libraries
DNA Res. 7, 175-180 (2000)
20363093 The First Laboratory for plant Gene Research Kazusa DNA Research Institute Yana 1537-3, Kisarazu, Chiba 292-0812, Japan Email: asamizu@kazusa.or.jp, URL:http://www.bLocation/Qualifiers AV440166 Arabidopsis thaliana above-ground organ two to six-week old Arabidopsis thaliana cDNA clone APD45d02_f 3', mRNA sequence.

AV440166 Arabidopsis thaliana cDNA clone APD45d02_f 3', mRNA sequence. AV440166.1 GI:7610522 EST. Contact: Erika Asamizu /organism="Arabidopsis thaliana" /strain="Columbia" URL: http://www.kazusa.or.jp/en/plant/.

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SOURCE

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RESULT 2
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                                                                                                                  FEATURES
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Hanagaki,T., Hayatsu,N., Hiraoka,T., Hirozane,T., Hodoyama,Y.,
Imotani,K., Ishii,Y., Itoh,M., Izawa,M., Kawai,J., Kojima,Y., Konno,H., Kusakabe,M., Matsuyama,T., Miyazaki,A., Nakamura,M., Nishi,K.,
Nomura,K., Numazaki,R., Okazaki,Y., Okido,T., Owa,C., Sakai,C.,
Sakai,K., Sasaki,D., Sato,K., Shibata,K., Shibata,Y., Shinatayawa,A.,
Shiraki,T., Sogabe,Y., Suzuki,H., Tagawa,A., Takahashi,F., Tanaka,T., Toya,T., Watahiki,A., Yamamura,T., Yasunishi,A., Yoshida,K.,
Yoshiki,A., Muramatsu,M. and Hayashizaki,Y.,
RIKEN, Mouse, ESTE (Alzawa,K. et al. 2000)
                                                                                                                                                                                                                                                                                                                                                            Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Carninci,p, N1shiyama,Y, Westover,A., Itoh,M., Nagaoka,S., Sasaki
,N., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
,N., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Thermostabilization and thermoactivation of thermolabile enzymes by
trehalose and its application for the synthesis of full length
cDNA. Proc. Natl. Acad. Sci. U.S.A. 95 (2), 520-524 (1998)
Itoh,M., Kitsunai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J.,
Tomaru,Y., Carninci,P., Shibata,Y., Ozawa,Y., Muramatsu,M., Okazaki
Y and Hayashizaki Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BB595771 RIKEN full-length enriched, 16 days embryo head Mus musculus cDNA clone C130005F08 5', mRNA sequence.
                                                                                                                                                                                                                                                      Automated filtration-based high-throughput plasmid preparation system. Genome Res. 9 (5), 463-470 (1999)
Carninci,P. and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tel: 81-45-503-9222
Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan Tel: 81-45-503-9222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 270)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
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                                                                                                                                             turther details
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                  19-44 (1999)
                                                                                                                                                                      Please visit our web site (http://genome.rtc.riken.go.jp) for
                                                                                                                                                                                                                           High-efficiency full-length cDNA cloning. Methods Enzymol. 303,
                                                                                                                                                                                                                                                                                                                                                . and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   71 a
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/organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
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/dev_stage="two to six-week old"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:3702"
/clone="APD45d02_f"
                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Vector: pBluescriptII SK-;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66.1%;
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Pred. No. 1.
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Best Local
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                                                                                                                                                                           Key Lab. of Crop Germplasm Rist. of Crop Germplasm R Beijing 10080 PR CHINA Tel: 86 1 62186623
                                                                                                                                                                                                                                                                                                                     Anderson, O.A., Appels, R., Bailey, P., Blake, T., Close, T., Clouti, S., Dubcovsky, J., Feuillet, C., Gale, M., Graner, A., Gustafson, Herrmann, R.G., Holton, T., Jacquemin, J.M., Jia, J., Joudrier, P., Langridge, P., Lazo, G.R., Lin, J.J., McGuire, P., Ogihara, Y., Pecchioni, N., Qualset, C., Schuch, W., Selvaraj, G., Shariflou, M., Sorrells, M., Warburton, M. and Wenzel, G. International Triticeae EST Cooperative (ITEC): Production of Expressed Sequence Tags for Species of the Triticeae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300 bp mRNA linear EST 21-CNW01PL0232 ITEC CNW Wheat Powdery Mildew Resistant Library Triticum aestivum cDNA clone CNW01PL0232, mRNA sequence. BE401232
                                                                                                                                                                                                                                                        Contact: Jia J
Key Lab. of Crop Germplasm & Biotechnology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooldeae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Triticum aestivum
                                                                                                                    http://wheat.pw.usda.gov/genome
                                                                                                                                     Email: jizeng@mlmi.cnc.ac.cn
International Triticeae EST Cooperative (ITEC)
                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bread wheat
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="C130005F08"
/clone_lib="RIKEN full-length enriched, 16 days embryohead"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             was cloned into the XhoI and BamHI sites. Vector: a modified pBluescript KS(+) after bulk excision from Lambda
/clone="CNW01pL0232"
               /cultivar="Powdery Mildew Resistant line"
/db_xref="taxon:4565"
                                                         /organism="Triticum aestivum"
                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="Site_1: SalI; Site_2: BamHI; cDNA library was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /tissue_type="head"
/dev_stage="16 days embryo"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sex="mixed"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:9360700
                                                                                                                                                                                                                                                                                                        (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Triticum.
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Pred. No. 1
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В

219

Matches

RESULT 3

BASE COUNT

FEATURES

COMMENT

JOURNAL TITLE REFERENCE

AUTHORS

SOURCE

ORGANISM

KEYWORDS VERSION

ACCESSION

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Query Match 66.13;
Best Local Similarity 52.23;
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
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|| | | | ::||::||| :::||
25 CAGACGCGGAACCANCCGGGCTC 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 inpublished (2001)

Contact: Dr. Judith F. Margolin

Texas Children's Cancer Center and Human Genome Sequencing Center at Baylo: College of Medicine

1102 Battes, MC3-3320 Houston, TX 77030, USA

Tel: 832-824-4536

Fax: 832-824-4536

Email: c.ones@txcc.org
Seq prlmcr: M13 primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla: Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases; 1 to 342)

Wei,Y., "Tsang,Y.T.M., Mei,G., Ku,J.M., Ali-Osman,F.R. Jr., Gunaratne,P.H., Muzny,D., Bouck,J., Gibbs,R.A. and Margolin,J.F. Pediatric; Leukemia cDNA Sequencing Project (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BM149376 342 bp mRNA linear EST 30-NOV-2001 TCAAP2Q11991 Pediatric acute myelogenous leukemia cell (FAB MI) Baylor-H3SC project-TCAA Homo sapiens cDNA clone TCAAP1199, mRNA sequence. BM149376 BM149376 BM149376 EST.
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                    51
υ
                                                                                                                                                                                                                                                                                                                     /tissue_type="leukopheresis"
/cell_type="myeloid cell"
/dev_stage="pediatric 6 years"
/ab_host="DH10B" tric 6 years"
                                                                                                                                                                                                                                                                                                                                                                                                      /clone="mcAAP1199"
/clone_lib="Pediatric acute myelogenous leukemia
/clone_Lib="Pediatric acute myelogenous leukemia
/clone_ToAA"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="leaf"
/dev_stage="seedling,
strain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          clone_lib="ITEC CNW Wheat Powdery Mildew Resistant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 15.2; DB 10;
Pred. No. 1.9e+03;
7; Mismatches 4;
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TITLE JOURNAL COMMENT

BASE COUNT

REFERENCE AUTHORS

KEYWORDS SOURCE

ORGANISM

VERSION

LOCUS DEFINITION RESULT 4 BM149376/c DЬ

125

BASE COUNT ORIGIN

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KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
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Best Local Similarity 47.8
Matches 11; Conservative
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   Homo sapiens
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata;
Eukaryota; Butheria; Primates; Catarrhini; Hominidae
1 (bases 1 to 360)
Mahairas, G.G., Wallace, J.C., Smith, K., Swartzell, S.,
Keller, A., Shaker, R., Furlong, J., Young, J., Zhao, S.
                                                                                                                                                                                                                            AQ207050

AQ207050

AQ207050

AQ207050.1 GI:3617620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The Arabidopsis thaliana transcribed genome: Unpublished (1996)
Contact: Philipps G., Gigot C.
Gigot Claude / L512
Gaboratoire de Biologie Moleculaire des Plant 12 Rue du General Zimmer, 67084 Strasbourg Ced Email: ARABANK@MEDDC.U-STRASBG.FR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis thaliana
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA sequence.
Z34718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Z34718
351 bp mRNA linear EST 11-JUL-ATTS3478 Strasbourg-A Arabidopsis thaliana cDNA clone FAIB8 3',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CNRS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Arabidopsis thaliana"
/strain='ecotype Columbia"
/db_xref='taxon:3702"
/clone='TpA188"
/clone='TpA188"
/clone='TpA188'
/clone='TpA1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 15.2; DB Pred. No. 2e+03; 7; Mismatches
e,J.C., Smith,K., Swartzell,S., Furlong,J., Young,J., Zhao,S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
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Pred. No. 2e+03;
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rg Cedex,France
                                                                                    Hominidae;
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                                                                                                               Euteleostomi;
Holzman,
Adams, M.
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SOURCE
ORGANISM
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LOCUS
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FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              302 CATAGTCGGAACCATCCTACCTC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  University of Washington 401 Queen Anne Avenue No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 360.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Mahairas GG, Wallace JC, Hood
High Throughput Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence-tagged connectors: A sequence approach to mapping and scanning the human genome Proc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-9744 (1999)
                                                                                                                                                                                                                                                                                                                                  Marra,M., Hiller,L., Kucaba,T., Martin,J., Beck,C., Wylie,T., Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Person,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ritter,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R., Waterston,R. and Wilson,R.

The WashU-NCI Mouse EST Project 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AI608175 361 bp mRNA linear EST 21-APR-vc83h10.y1 Ko mouse embryo 11 5dpc Mus musculus cDNA clone IMAGE:789667 5' similar to TR:Q63418 Q63418 PROTOCADHERIN 3. ;,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Class: BAC ends
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99380589
                                                                                                                                                      Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                Unpublished (1999)
Contact: Marra M/WashU-NCI Mouse EST Project 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 361)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA sequence.
AI608175
                                                                                              MGI:474075
This read is a RESEQUENCE of a previously
This read has been verified (found to hit
                                                                                                                                                                                                                                                        Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AI608175.1 GI:4617342
                                                                                                                                                                                                                   Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          house mouse
                                 Possible reversed clone: similarity on Seq primer: Primer name ambiguous
                                                                           correct orientation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Queen Anne Avenue North, Seattle, (206) 616-3618 (206) 616-887 il: jwallace@u.washington.edu
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                quality sequence stop: 161.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Organ: sperm; Vector: pBeloBAC11; BAC Clones in
E-Coli_DH10B"
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/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="CIT Approved Human Genomic Sperm Library D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="Plate=3242 Col=8
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47.8%;
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                                                                                                    sequenced mouse clone its original self in t
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TITLE
JOURNAL
COMMENT
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BE353050/c
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AUTHORS
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ORIGIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
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Best Local 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACACACTGAACAACCCGGGCTC 146
                                                                                                                                                                                    Laboratory for Genomics and Bioinformatics
The University of Georgia, Department of Plant Biology
Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271,
Tel: 706 542 1860
Fax: 706 583 0210
Email: mmpratt@uga.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BE353050 406 bp mRNA linear E DG1_3_F05.g1_A002 Dark Grown 1 (DG1) Sorghum bicolor
                                                                                                                                                                                                                                                                                             An EST database from Sorghum: dark-grown Unpublished (2000)
Contact: Cordonnier-Pratt MM
                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACC clade; Panicoideae; Andropogoneae; Sorghum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence.
BE353050
                                                                                                                                                                                                                                                                                                                                                                       Cordonnier-Pratt, M.-M., Gingle, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sorghum bicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sorghum.
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                                                                                                                                                 sequences have been trimmed below Phred quality 16. The
                                                                                    High quality sequence start:
High quality sequence stop: '
                                                                                                                       Seq primer: T7
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                                                                                                                                        is 20.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGATAGTCGACGTCAAT 3'. The cDNAs were size-selected and amplified by long-range PCR using Ex Taq polymerase for 18 cycles. The PCR-amplifiable cDNA mixture went through one round of equalization and was digested with SalI/NotI and cloned into the SalI/NotI sites of the pSPORT1 plasmid vector (Life Technologies). The library was plasmid vector (Life Technologies).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              constructed Wang."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="embryo"
/dev_stage="11.5dpc"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="pooled"
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/organism="Sorghum bicolor"
/db_xref="taxon:4558"
                                                 Location/Qualifiers
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47.8%;
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threshold for high
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                                                                                                                                                            lyA, vector and regions highest quality sequence
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JOURNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shoemaker, R., Keim, P., Vodkin, L., Erpelding, J., Coryell, V., Khanna, A., Bolia, B., Marra, M., Hillier, L., Kucaba, T., Martin, J., Beck, C. Wylle, T., 'Underwood, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schur, R., Ritter, E., Kohn, S., Shin, T., Jackson, Y., Cardenas, M., McCann, R., Watarston, R. and Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BE209956 410 bp mRNA linear EST 04-DEC-2001 so37b07.yl Gm-c1039 Glycine max CDNA clone GENOME SYSTEMS CLONE ID: Gm-c1039-jl0 5' similar to TR:043201 Q43201 1-AMINOCYCLOPROPANE-1-CARBOXYLATE SYNTHASE; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: e.st@watson.wustl.edu
This clo.e is available through: ResGen, Invitrogen Corp.
South Memorial Parkway Huntsville, AL 35801 For further ir
call: (800)-533-4363 or contact via email: ccu@resgen.com
Insert Langth: 1204 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Shoemaker R/Public Soybean EST Project
Public Soybean EST Project
Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; Gurosids I; Fabales; Fabaceae; Papillonoldeae; Phaseoleae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High qua.ity sequence stop: 409.
Laporation/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 410)
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314 286 1810
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hote-"vector: pBluescriptII SK+; Site_1: EcoRI; Site_2: XNoI; This cDNA library was constructed from mRNA isolated from 2 week old seedlings with the cotyledons removed at the time of harvest. The seedlings for the cultivar Ogden were grown in a growth chamber using germination paper: Complementary DNA was synthesized from mRNA using a primer consisting of a poly(dT) sequence with a XNoI restriction site. EcoRI adapters were ligated to the blunt-ended cDNA fragments were directionally cloned into the EcoRI-XNoI restriction site of the pBluescript vector. The ligated cDNA fragments were transformed into DH10B host cells (Gibco BRL). This
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/note="Organ: 5-day-old dark-grown seedlings; Vector:
imabda Zap; Site_1: xho1; Site_2: EcoRI; The library was
made from poly-A RNA in the cloning vector lambda ZAP II.
Clones to be sequenced were prepared by mass excision."
88 c 117 g 96 t
                                                                                                                                                                                                                                                                                                                                              /:issue_type="whole seedling without cotyledons"
/.ab_host="DH10B"
/.note="Vector: pBluescriptII SK+; Site_1: EcoRI;
                                                                                                                                                                                                                                                                                                                                                                                                                                          /brganism="Glycine max"
/db_xxef="taxon:3847"
/clone="GROME SYSTEMS CLONE ID: Gm-c1039-110"
/clone_lib="Gm-c1039"
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                                                                                                                                                                       256 CACACCCTGAACCATCCGGGCTC 278
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                                                                                                                                                                                                              1 CANANNCKRAASMANCCNRSYTC 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 413)
Michalek,W., Weschke,W., Pleissner,K.-P. and Graner,A
EST sequencing and analysis in barley
Unpublished (2000)
Contact: Michalek W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Institute for Plant Genetics and Crop Plant Research Corrensstr.3, D-06466 Gatersleben, Germany Email: michalekeipk-gatersleben.de, http://pgrc.ipk-gatersleben.de Seq primer: M13uni primer for 3'end.
                                    AV820681 RAFL11 Arabidopsis thaliana cDNA clone RAFL11-11-L09 3',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae
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                   mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                        /note "Vector: plasmid pBK-CMV; Site_1: EcoRI; Site_2: XhoI; mRNA was made from roots of spring barley variety 'Barke', a high quality malting variety, Roots were grown for two days on filter paper at room temperature Cloning sites: EcoRI (5'-end of cDNA) and XhoI (3'-end of cDNA); NOTE: Due to a cloning artefact caused by the kit, in most cases the EcoRI site is NOT present, as well as the EcoRI adapter. Average insert size is 1 kb Sequence trimming: Vector sequences and sequence ends were trimmed from the 5'-and 3'-end until a 50 bp window contains less than two ambiguities. The maximum length was set to 700 bp" and 116 c 92 g 121 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  library was constructed by Dr. Randy Shoemaker." a 72 c 110 g 130 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cultivar"Barke"
/db_xref="taxon:4513"
/db_xref="taxon:4513"
/clone='Hw0/P070"
/clone='Hb-"Hordeum vulgare Barke roots"
/tissue_type="roots"
/lab_host="XLOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Hordeum vulgare"
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47.88;
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Pred. No. 2.2e+03;
                                                                                                                                                                                                                                                                            Score 15.2; DB 9; Length 413; Pred. No. 2.2e+03;
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Best Local :
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An Arabidopsis full-length cDNA library was constructed essentially
An Arabidopsis full-length cDNA library was constructed with BamHI
as reported previously (Seki et al., 1998). cDNA cleaved with BamHI
and XhoI was ligated to modified Lambda FLC-1 vector (Carninci et
al., submitted for publication) digested with BamHI and SalI. This
clone is in a modified pBluescript vector. Please visit our web
site (http://www.gsc.riken.go.jp/e/plant/index_e.html) for further
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Plant Functional Genomics Research Group
RIKEN Genomic Sciences Center
3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074, Japan
Tel: 81-298-36-4359
Fax: 81-298-36-9060
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Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
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                                                                                     Seki,M., Narusaka,M., Ishida,J., Kamiya,A., Satou,M., Nakajima,M., Oono,Y., Sakurai,T., Carninci,P., Kawai,J., Itoh,M., Ishii,Y., Arakawa,T., Shibata,K., Shinagawa,A., Muramatsu,M., Hayashizaki,Y.
                                                                                                                                                                          Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                      mRNA sequence.
AV808550
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                  Large scale analysis of Arabidopsis full-length cDNA (2002b) Unpublished (2002)
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                                                               Shinozaki, K
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/lab_host="bH10B"
/note="Site_1: BamHI; Site_2: SalI; subjected to various treatments (dehydration, cold, high salt, ABA, heat and large transparents (dehydration); Dark-grown plants"
). Dark-grown plants"
105 c 64 g 129 t
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/clone_lib="RAFL11"
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/db_xref="taxon:3702"
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47.88;
Seki
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Pred. No. 2.2e+03;
7; Mismatches 5
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RAFL09-55-E15 3',
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                 source
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: mseki@rtc.riken.go.jp
An Arabidopsis full-length cDNA library was constructed essentially as reported previously (Seki et al., 1998). cDNA cleaved with BamHI and XhoI was ligated to modified Lambda FLC-1 vector (Carninci et al., submitted for publication) digested with BamHI and Sall. This clone is in a modified pBluescript vector. Please visit our web site (http://www.gsc.riken.go.jp/e/plant/index _e.html) for further details.
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RIKEN Genomic Sciences Center
3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074, Japan
Tel: 81-298-36-4359
Fax: 81-298-36-9060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A2863097 431 bp DNA 19
2M0171003F Mouse 10kb plasmid UUGCIM library
Clone UUGC2M0171003 F, DNA sequence.
                                                                                                                                                                                                                                                                                                                                                                        Dunn, D., Aoyagi, A., Barber, M., Beacorn, T., Duval, B., Hamil, C., Islam, H., Longacre, S., Mahmoud, M., Meenen, E., Pedersen, T., Reilly, M., Rose, M., Rose, R., Stokes, R., Tingey, A., von Niederhausern, A.
                                                                                       Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error:
Plate: 0171 row: O column: 03
Seg primer: CGTTGTAAAACGACGGCCAGT
                                                                                                                                                                                                                         University of Utah (
University of Utah
Rm. 308, Biomedical
                                                                                                                                                                                                                                                                             Unpublished (2000)
Contact: Robert B.
                                                                                                                                                                                                                                                                                                                                        Mouse whole genome
                                                                                                                                                                                                                                                                                                                                                          and Wright, D., Weiss, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria;
1 (bases 1 to 431)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
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                                                                                                                                                                  Tel: 801 585 5606
Fax: 801 585 7177
                                                                                                                                                                                                                                                                                                                        plasmid inserts
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 house mouse.
                                                                         Class: plasmid ends
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                                 quality sequence stop: 431
Location/Qualifiers
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dehydration (1, 2, 5, 10, 24 hr)
hr) treatments"
101 c 72 g 129 t
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/lab_host="DH10B"
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/organism="Mus musculus"
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47.8%;
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AUTHORS
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Best Local
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Zhang, H. Weschke, W., Michalek, W., Stein, N. and Steinstein and analysis in barley (2002)

Unpublished (2002)

Contact: Stein Nils

Molecular Markers Group, Department Genbank
Institute of Plant Genetics and Crop Plant Rese

Corrensstr. 3, 06466, Gatersleben, Germany

Tel: 039487-5595

Email: stein@ipk-gatersleben.de
                                                                                                                                                                                               numall: stein@ipk-gatersleben.de
Insert Len@th: 455 Std Error: 0.00
Plate: 1 row: D column: 16
Seg primer: T3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence.
BQ468428 |
BQ468428.1
EST.
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Hordeum vulgare
Bokaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophi/ta; Magmoliophyta; Liliopsida; Poales; Poaceae; Pooidea
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HM01D16T
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        was hydrodynamically sheared by repeated passage through a C.005 inch orifice at constant velocity. The Sheared DNA was blunt end-repaired with T4 DNA polymerase and T4 golynucleotide kinase. Adaptor oligonucleotides were ligated to the blunt ends in high molar excess. The adaptored DNA was purified and size-selected for a 9.5 to 10.5 kb range using preparative agarose gel electrophoresis. Vector DNA was prepared from a derivative of pNA2 (gil4732114 gb)AF129072.1), a copy-number inducible derivative of plasmid R1. The vector was ligated with adaptors complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to chemically-competent E. coli XL10-Gold (Stratagene) cells and selected for ampidilin resistance."
/db_xref="taxon:4513"
/dlone="HM01D16"
/dlone_1ib="HM"
/dlone_1ib="HM"
/tissue_type="male inflorescences"
/dev_stage="male inflorescences (approx.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Η
                                                                                                               /organism="Hordeum vulgare"
/cultivar="Barke"
                                                                                                                                                                           decation/Qualifiers
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/note="Vector: PWD42nv; Purified genomic DNA from M.
musculus C57BL/6J (male) was obtained from the Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Laboratory Mouse DNA Resource
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/db_xef="taxon:10090"
/clone="UgC2M0171003"
/clone_1Ub="Mouse 10kb plasmid UUGCIM library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (http://www.jax.org/resources/documents/dnares/).
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7; Mismatches 5;
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                                                                                                                                                                                                                                                                                                                                                            Email: szhao@tigr.org
Clones are derived from the mouse BAC library RPCI-23. For BAC
library availability, please contact Pieter de Jong
(pieter@dejong.med.buffalo.edu). Clones may be purchased from
BACPAC Resources (http://bacpac.med.buffalo.edu/orderingframe.htm)
or from Resea ch Genetics (info@resgen.com). BAC end page:
http://www.tigr.org/tdb/bac_ends/mouse/bac_end_intro.html
plate: 180 row: N column: 17
Seg primer: SP6
Class: BAC ends.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville,
Tel: 301 838 0200
Fax: 301 838 0208
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RPCI-23-180N17.TJ RPCI-23 Mus
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/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="RPCI-23-180N17"
/clone_lib="RPCI-23"
/sex="Female"
/lab_host="DH10B"
/note-*Organ: Kidney/Brain; Vector: pBACe3.6; Site_1: EcoRI; Site_2: EcoRI; Female C57BL/6J mouse kidney and/or brain genomic DNA was isolated and partially digested with a combination of EcoRI and EcoRI Methylase. Size selected DNA was cloned into the pBACe3.6 Vector at the EcoRI sites. The ligation products were transformed into DH10B electrocompetent cells (BRL Life Technologies). "
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//lab/host="XLI0-Gold"
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//note="Wector: pBluescript SK+; Site_1: EcoRI (5'-end of CDNA); Site_2: XhoI (3'-end of cDNA); Due to a Cloning artefact caused by the kit, in most cases the EcoRI site is NOT present, as well as the EcoRIdapter used for cloning. To excise the insert, restriction sites upstream EcoRI should be used (e.g. BamHI, SalI,PstI). NOTE: Also due to the cloning system used BamHI, SalI,PstI). NoTE: Also due to the cloning system used muse/white selection for recombinats is not 100% reliable."
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| ъщ. | | FEATURE: NAME/K LOCATI OTHER 08-724-194 | SEQU TY ST TO | NAME: SANTANGELO, LUKE REGISTRATION NUMBER: 31,9 TELECOMMUNICATION INFORMATIO TELEPHONE: (970) 224-3100 INFORMATION FOR SEQ ID NO: 9: | AP FI CL ATTO | COMPUTER MEDIUM COMPUTE OPERATI SOFTWAR | STAT COUN ZIP: | CORR | APPLICANT: TITLE OF I TITLE OF I TITLE OF I | ESULT 1 S-08-724-1 Sequence Patent No | | 443 | 40 41 42 | 3 3 3 6 3 6 7 6 | 2 W W C | 321 | 0 90 |
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| GGNYTNCCNGGNTTYMGNRTNGG | h Similarity 23; Conser | ATURE: NAME/KEY: misc_feature feature | SEQUENCE CHARACTERISTICS: LENGTH: 23 base pairs TYPE: nucleic acid STRANDEDNESS: single TOPOLOGY: linear | NAME: SANTANGELO, LUKE REGISTRATION NUMBER: 31,997 TELECOMMUNICATION INFORMATION: TELEPHONE: (970) 224-3100 FORMATION FOR SEQ ID NO: 9: | APPLICATION UDMBER: US/0 APPLICATION UDMBER: US/0 FILING DATE: 01-0CT-1996 CLASSIFICATION: 800 ATTORNEY/AGENT INFORMATION: | COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTMARE: Patentin Release #1.0 | CITY: FORT STATE: CO COUNTRY: U. ZIP: 80521 | SPONDENCE RESSEE: 315 | ICANT: RANU, RAJIND E OF INVENTION: ONE E OF INVENTION: SYN E OF INVENTION: IN | 4 | | 2 | | | 0000 | | 4-4-4 |
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| ALL | .y rva | ON: | ARACTERISTICS 23 base pairs cleic acid ESS: single linear | SANTANGELO, RATION NUMBE RNICATION IN NNE: (970) FOR SEQ ID | 10 E | M: POE | È | E ADDRESS: SANTANGELO SWEST OAK S | | ion | | 246 246 | 2 4 6 2 2 | 2210 2210 2210 2242 | | د | ىر بر |
| MGI | t 1 6 | feature (3, 6, N: /no | Jain Jain Jugle | IFOI 224 NO | ER: -OCT- 800 | FORM: LOPPY PC COM PC TOM THE IN R | Ũ | OAH SSS: | is SS TIL | C C | | 24 C 23 E | 427 678 240 | 210 | 712 | 26 | 155 |
| RTZ | | ure 6, 9, /note= | , , , , , , , , , , , , , , , , , , , | LUKE R: 31, ORMATI 24-310 | JMBER: US/08 01-OCT-1996 U: 800 U: 800: | E FORM: Floppy disk [PC compati PM: PC-DOS entIn Relea | | ELO I | H GE | 9 Application US/0872419 8824875 | | | | μ <u></u> μ.Δ.) | | | |
| ดี | ٠. | 9, 1 9te= | | 00. NOI. | œ | ik ibl is/N | | LAW OFFICES STREET, STE | MIN ASE | 724 | | | | | | | |
| 23 | Score Pred 0; Mi | 12, "N | | 1: 77 | /724 | .e 1-81 1-81 | | T, OFF | HUN GE 10C3 | 194 | ** | - Si 0-Si | 0-8 0-8 | 0 - 0 - 0 0 - 0 - 0 | 900 | 0-8 | CT-C |
| | core Pred. Mis | 18, | | | 24,194 | . 0, 800 | | STE | NES | | LIC | 7-9-7 | 8-7 | | 2000 | 000 | 0.85 2.80 |
| | 15.4; No. | 21 ores | | | 4 | | | |)PRC | | MME | 24 | 78- 24- | 64.4 | 222 | 64- | 31- |
| | re 15.4; ed. No. 10 Mismatches | , 21) presents | | | | Version | | 01 PC | ρΑ. MOM | | ALIGNMENTS | 394 | 194 | 700 | 59E | 700 | 410 |
| | 10; 10; | | | | | ion | | | PEI | | 0.7 | US-08-724-394A-21 US-08-724-394A-22 US-07-903-466-32 | A-3 | P-53 | |)-40 -15 | 2-4 |
| | ш | Inosine | | | | #1. | | | RAJINDER S. ONE-AMINOCYCLOPROPANE-1-CARBOXYLATE SYNTHASE GENES FROM PELARGONIUM TO (IN GERANIUMS | | | 221 | 9 9 | 7 | | - | |
| | | ine | | | | 30 | | | RBC | | | | | | | | |
| | Length Indel: | 2 | | | | | | | UM XYI | | | | | | | | |
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| | 0, | | | | | | | | CONTROL | | | Sequence Sequence Sequence | enc enc | Sequence Sequence | enc | enc | enc enc |
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| , | Gaps | | | | | | | | АНЪ | | | | | 1, A 53, A | > | 15, | D D |
| | | | | | | | | | ETHYLENE | • | | Appl Appl Appl | Appli Appli Appli | Appli Appli Appl | Appli Appli Appli Appli | Appl Appl | Appl Appl |
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LOCATION: 3, 6, 9, 12, 18, and 21
; OTHER INFORMATION: PCR primer
US-09-171-482-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-846-826A-3
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US-09-171-482-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 3, Application US/08846826A Patent No. 6194639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/171,482A CURRENT FILING DATE: 1998-10-19 EARLIER APPLICATION NUMBER: PCT/US97/17644, Published under WO98/14465; US5,824,875 EARLIER FILING DATE: 1997-Sept-30, Published 1998-April-09; 1996-Oct-01 NUMBER OF SEQ ID NOS: 9 SOFTWARE: Word Perfect 6.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ranu, Rajinder S.
TITLE OF INVENTION: A 1-AMINOCYCLOPROPANE-1-CARBOXYLATE SYNTHASE GENE FROM
TITLE OF INVENTION: ROSA TO CONTROL ETHYLENE LEVELS IN ROSES
FILE REFERENCE: TAGAWA-ROSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
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TYPE: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM CC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0.
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Botella, Jose
APPLICANT: Sanewski, Garth
APPLICANT: Sanewski, Garth
TITLE OF INVENTION: NOVEL ACC SYNTHASE GENES FROM PINEAPPLES
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
                               REGISTRATION NUMBER: 27,363
REFERENCE/DOCKET NUMBER: 87
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-965-1280
                                                                                                                                                              CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: AU PN9582
FILING DATE: 01-MAY-1996
                                                                                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: One Commerce
STREET: Floor
CITY: Philadelphia
TELEPHONE: 215-567-2991
                                                                                                 NAME: Nadel Esq., A REGISTRATION NUMBER:
                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP:
                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
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                                                                                                                                                                                                                                                     UMBER: US/08/846,826A
01-MAY-1997
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                                                                                                                        Alan S.
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 Mismatches

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NAME/KEY: CDS

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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                              TELEFAX: 215-567-2991
TELEX: 831-494
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: AU PN9
FILING DATE: 01-MAY-1996
ATTORNEY/AGENT INFORMATION:
NAME: Nadel Esq., Alan S.
REGISTRATION NUMBER: 27,36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                REGISTRATION NUMBER: 27,363
REFERNCE/DOCKET NUMBER: 87
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-965-1280
                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Botella, Jose
APPLICANT: Sanewski, Garth
TITLE OF INVENTION: NOVEL ACC SYNTHASE GENES FROM PINEAPPLES
              MOLECULE TYPE:
                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 968 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release "."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: One Commerce Square, 2005 Market Street, 22nd STREET: Floor
                                             STRANDEDNESS:
                                                                                                                                                              TELEPHONE:
                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/846,826A FILING DATE: 01-MAY-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: double
                               TOPOLOGY:
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                                               double
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56.5%;
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Pred. No. 18;
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US-08-860-577-7
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US-08-846-826A-1
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US-08-860-577-7
                                                                                                                                                                                                                                                                                                    NAME: Mueller; Lisa V.
REGISTRATION HUMBER: 38,978
REFERENCE/DOCIE; MUMBER: SVS3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5460
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
TENERH: 994 tase pairs
Sequence 1, Applicacijn US/09043627
                                                                                                                                  Matches
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APPLICANT: Deng, Rosaline Z.
APPLICANT: Carney, Kim J.
APPLICANT: Ruttencutter, Glen E.
APPLICANT: Reynolds, John F.
APPLICANT: Reynolds, John F.
TITLE OF INVENTION: Transgenic Plants Expressing ACC
TITLE OF INVENTION: Synthase Genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:

MEDIUM TYPE: FIDPPY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PA:-Ph.LIN Release #1.0, Version #1.30
CURRENT APPLICATION NUMBER: US/08/860,577
FILLING DATE:
                                                                                                                                                                                                                                  FEATURE
                                                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 800
ATTORNEY/AGENT : NFORMATION:
                                                                      621 GGTCTTCCCGGTTTTCGAGTTGG 643
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                                                                                                                                                                                                                                                                       LENGTH: 994 kase pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                   NAME/KEY:
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5. 5998702
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                                                                                                                               Similarity 56.5
13; Conservative
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180 N. Stetson, 2 Prudential Plaza, Suite
4700
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Pred. No. 1
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Pred. No. 1
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                                                                                                                                                          DB 2; Length 994;
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RESULT 7
US-09-043-627-7
Sequence 7, Application US/09043627
Patent No. 6124525
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; LOCATION:
US-09-043-627-1
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GENERAL INFORMATION:
APPLICANT: Botella, Jose Ramon
TITLE OF INVENTION: NOVEL ACC SYNTHASE GENES
NUMBER OF SEQUENCES: 19
                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/AU96/00
ETLING DATE: 20-SEP-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: AU PN5559
FILING DATE: 20-SEP-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: AU PN9603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-924-8555
TELEPAX: 609-924-3036
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                     APPLICANT: BOTELLA, JOSE RAMON
TITLE OF INVENTION: NOVEL ACC SYNTHASE GENES
NUMBER OF SEQUENCES: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OPERATING SYSTEM: PC-D
SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
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ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 20-MAR-CLASSIFICATION: 800 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
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                                 STREET: 100 Tha
COUNTRY
                  STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Bernstein, Scott N. REGISTRATION NUMBER: 38,827 REFERENCE/DOCKET NUMBER: 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: single
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                                                                  ADDRESSEE:
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                                                 E: MATHEWS, COLLINS, SHEPHER 100 Thanet Circle, Suite 306
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100 Thanet Circle, Suite
USA
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02-MAY-1996
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20-SEP-1996
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                                                                                                                                                                                                                                                                                                                                                                   67.0%; Score 15.4; 56.5%; Pred. No. 1
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                                                                    COLLINS, SHEPHERD & GOULD P.A.
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INFORMATION FOR SEQ ID NO: 7:
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TELECOMMUNICATION INFORMATION: 609-924-8555
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/
FILING DATE: 20-SEP-1996
                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Botella, Jose Ramon
TITLE OF INVENTION: NOVEL ACC SYNTHASE GENES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 1096 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NOTE: 20-SEP-1996
FILING DATE: 20-SEP-1996
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: AU PN5559
                                                                                                         CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 800
PRIOR APPLICATION NUMBER: PCT/AU96/00591
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688 GGCCTCCCTGGCTTTAGGGTTGG 710
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MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                                                                        STREET: 100 That CITY: Princeton
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS: single
                                                       CLASSIFICATION:
                                                                     APPLICATION NUMBER: US/09/043,627 FILING DATE: 20-MAR-1998
                                                                                                                             SOFTWARE:
                                                                                                                                                                                                                                        COUNTRY:
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                                                                                                                             PatentIn Release #1.0, Version #1.30
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                 PCT/AU96/00591
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US-09-043-627-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 3, Application US/09043627 Patent No. 6124525
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 609-924-3036 INFORMATION FOR SEQ ID NO: 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 20-SEP-1995
PRIOR APPLICATION DATA:
APPLICATION UNMBER: AU PNI
FILING DATE: 02-MAY-1996
ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: 38,827
REFERENCE/DOCKET NUMBER: 35
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-924-8555
                                                                                                                                                                                                                                                                                                                          SOFTWARE: Patentin RecURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Botella, Jose Ramon TITLE OF INVENTION: NOVEL ACC SYNTHASE GENES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 35
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-924-8555
                                                                                     APPLICATION NUMBER: AU PIFILING DATE: 02-MAY-1996 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                              APPLICATION NUMBER: PCT/
FILING DATE: 20-SEP-1996
PRIOR APPLICATION DATA:
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LENGTH: 1098 base pairs
                                                                                                                                           PRIOR APPLICATION DATA:
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APPLICATION NUMBER: AU PN5559
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CTTY: Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             688 GETCTCCCGGTTTCCGGGTAGG 710
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LOCATION:
                                                                                                                                                             APPLICATION NUMBER: AU PFILING DATE: 20-SEP-1995
                                                                                                                                                                                                                                                                       FILING DATE: 2
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Bernstein, Scott N. REGISTRATION NUMBER: 38,8
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                                                                     Bernstein
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                                                                     Scott N.
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56.5%;
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Pred. No. 1
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; LOCATION:
US-09-043-627-3
US-09-043-627-9
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                                                                                                                                                                                            TELEFAX: 609-9:4-3036
INFORMATION FOR SIQ, ID NO: 9:
SEQUENCE CHARACTERIZETICS:
LENGTH: 1113 base pairs
TYPE: nuclei: 4c14
TYPE: nuclei: 4c14
STRANDEDESS: !ingle
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SEQUENCE CHARACTERISTICS:
LENGTH: 1104 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NIMBER: US/09/043,627
FILING DATE: 20-MAR-1998
CLASSIFICATION: 800
ARBEITATION NIMBER: COMMANDER: COMM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NIMBER: AU PN9603 FILING DATE: 02-MAY-1996 ATTORNEY/AGENT ::NFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 23-SEF-1330
FRIOR APPLICATION DATA:
PRIOR APPLICATION NIMBER: AU PN5559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IB4 PC compatible
COMPUTER: BY PC COMPUTER COMPUTER COMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Botella, Jose Ramon
TITLE OF INVENTICA: MOVEL ACC SYNTHASE GENES
NUMBER OF SEQUENÇES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: MATHEWS, COLLINS, SHEPHERD & GOULD P.A.
                                                                                              MOLECULE TYPE: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION; INFORMATION:
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PRIOR APPLICATION DATA:
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697 GGATTCCCTEGATTTAGAGTTGG 719
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Bernstein, Scott N. REGISTRATION HUMBER: 38,827 REFERENCE/DOCKET NUMBER: 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
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                                                                 NAME/KEY:
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23-SEP-1996
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56.5%; Pred. No. 18;
tive 4; Mismatches
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US-08-860-577-1
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Patent No.
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Best Local Similarity
Matches 13; Conserv
                                Matches
                                                             Query Match
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INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1384 base pairs
                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Mueller, Lisa v.
REGISTRATION NUMBER: 38,978
REFERENCE/DOCKET NUMBER: 5VS:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0.
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Boeshore, Maury L.
APPLICANT: Deng, Rosaline Z.
APPLICANT: Carney, Kim J.
APPLICANT: Ruttencutter, Glen E.
APPLICANT: Reynolds, John F.
APPLICANT: Reynolds, John F.
TITLE OF INVENTION: Transgenic Plants Expressing ACC
TITLE OF INVENTION: Synthase Genes
NUMBER OF SEQUENCES: 11
                                                                                                                                       FEATURE
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STREET: 4700
CITY: Chicago
STATE: IL
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TOPOLOGY: linear
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STREET: 180 N. Stetson, 2 Prudential Plaza, Suite
STREET: 4700
                              Local Similarity 56.: ses 13; Conservative
                                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                         LOCATION:
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595..1383
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135..433
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56.5%;
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56.5%;
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                                             Score 15.4;
Pred. No. 1
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Pred. No. 1
                                Mismatches
                                                  19;
                                                             DB 2; Length 1384;
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US-07-809-457A-8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION UMBER: US 07/862,493
FILING DATE: 02-APR-1992
ATTORNEY/AGENT INFORMATION:
NAME: MURASHIGE, KATE H.
REFERENCE/DOCKET NUMBER: 29,959
REFIECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECAX: (415) 856-5600
TELECAX: (415) 494-0792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: THEOLOGIS, ATHANASIOS
APPLICANT: STO, TAKAHIDO
TITLE OF INVENTION: CONTROL OF FRUIT RIPENING THROUGH
TITLE OF INVENTION: GENETIC CONTROL OF ACC SYNTHASE SYNTHESIS
                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1703 base pair
                                                           APPLICANT: Klee, Harry J.
APPLICANT: Kishore, Ganesh M.
APPLICANT: Kishore, Ganesh M.
TITLE OF INVENTION: Control of Fruit Ripening and Senescence
TITLE OF INVENTION: in Plants
CORRESPONDENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIF: 94304-1018
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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LOCATION:
                               STREET:
                                                 ADDRESSEE:
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les 13; Conser
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STATE: California
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Missouri
                               E: Monsanto Co. BB4F
700 Chesterfield Village Parkway
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56.5%; Pred. No. 20
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ZIP: 63198
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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GENERAL INFORMATION:
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Best Local Similarity
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
FILING DATE: 26-DEC-1990 ATTORNEY/AGENT INFORMATION: NAME: Hoerner Jr., Denni
                                                                                               CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/809,457
FILLING DATE: 17-DEC-1991
APPLICATION NUMBER: US 07/632,440
                                                                                                                                                                                                                                                                                                                                                      OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Klee, Harry J.
APPLICANT: Kishore, Ganesh M.
APPLICANT: Kishore, Ganesh M.
TITLE OF INVENTION: Control of Fruit Ripening and Senescence
TITLE OF INVENTION: in Plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 38
TELECOMMUNICATION INFORMATION:
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APPLICATION NUMBER: US 07/632,440
FILING DATE: 26-DEC-1990
ATTORNEY/AGENT INFORMATION:
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ZIP: 63198
                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
FILING DATE: 06-NOV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: St. Louis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: Monsanto Co. BB4F
STREET: 700 Chesterfield Village Parkway
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
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DEDNESS: double
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Missouri
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                                                                JMBER: US 07/632,440
26-DEC-1990
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56.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 15.4;
Pred. No. 20;
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                                                                                                                                                                                                                                                                                                                                                                                               Version #1.25
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REGISTRATION NUMBER:

Hoerner Jr., Dennis R. RATION NUMBER: 30,914

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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER EN PROPRIATION
COMPUTER BILLY COMPATION
SOFTWARE: PATCHING PC-DOS/MS-DOS
SOFTWARE: PATCHING PC-DOS/MS-DOS
CURRENT APPLICATION NUMBER: PCT/US91/09437
FILING DATE: 1991217
CLASSIFICATION DATA:
APPLICATION NUMBER: US 07/632,440
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 30,7632,440
ATTORNEY/AGENT 1NTORMATION:
NAME: HOEINE! 17. Dennis R.
REGISTRATION NUMBER: 30,914
REFERENCE/DOCLET NUMBER: 30,914
REFERENCE/DOCLET NUMBER: 38.21(10538)A
TELEPONMUNICATION INFORMATION:
TELEPAN: (314)537-6047
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACIERISTICS:
LENGTH: 1800 bese pairs
SEQUENCE CHARACIERISTICS:
LENGTH: 1800 bese pairs
STRANDEDNESS: double
TOPOLOCY: LinegT
MOLECULE TYPE: COMA to mRNA
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TELECOMMUNICATION: TELEPHONE: (314)537-6099
TELEPHONE: (314)537-6099
ITELEPHONE: (314)537-6099
INFORMATION FOR SEC ID NO: 8:
SEQUENCE CHARACTIFRISTICS:
LENGTH: 1800 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: GDNA to mRNA
US-08-553-943-8
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PCT-US91-09437-8
                                                                                  Query Match 67.0%; Sc
Best Local Similarity 56.5%; Pr
Matches 13; Conservative 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 8, Application PC/TUS9109437
GENERAL INFORMATION:
APPLICANT: Kies, Harry J.
APPLICANT: Kistore, Ganesh M.
APPLICANT: Kistore, Ganesh M.
TITLE OF INVENTION: Control of Fruit Ripening and Senescence TITLE OF INVENTION: in Plants
NUMBER OF SEQUENCES: 17
CORRESPONDENCE.AD)2RESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 67.0%; Score 15.4; I Best Local Similarity 56.5%; Pred. No. 20; Matches 13; Conservative 4; Mismatches
994 GGGTTACCAGGATTTAGAGTCGG 1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGNYTNCCNG3NTTYMGNRTNGG 23
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994 GGGTTACCAG3ATTTAGAGTCGG 1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: MonBanto Co. BB4F
STREET: 700 chasterfield Village Parkway
'CITY: St. Louis
STATE: Missourk
COUNTRY: UGA
2IP: 63198
                                      1 GGNYTNCCNGGNTTYMGNRTNGG 23
                                                                                     Score 15.4; | Pred. No. 20; | 4; Mismatches
                                                                                                                                 DB
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                                                                                                                           Length 1800;
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Search completed: March 10, 2003, 06:44:17 Job time : 53 secs

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Title:
Perfect score:
Sequence:
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Listing first 45 summaries
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Maximum DB seq length: 2000000000
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             Database
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             Pred. No. is the number of results predicted by chance to have a score greater thin or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
                                         US-09-975-842-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
Match Length DB
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1: /cjn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cjn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cjn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cjn2_6/ptodata/1/ina/FCTUS_COMB.seq:*
5: /cjn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cjn2_6/ptodata/1/ina/backfiles1.seq:*
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Gapop 10.0 , Gapext 1.0
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US-08-673-768-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
Sequence 10, Appli Sequence 7, Appli Sequence 3, Appli Sequence 11, Appli Sequence 11, Appli Sequence 11, Appli Sequence 3, Appli Sequence 3, Appli Sequence 11, Appli Sequence 3, Appli Sequence 11, Appli Sequence 11, Appli Sequence 11, Appli Sequence 21, Appli Sequence 22, Appli Sequence 21, Appli
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| | Query Ma Best Loo Matches | SULT 1 Sequent Pateuent Pateue | | 44 44 44 5 | 36 38 40 | € € € € € € | 29 |
| 1 CANANNCKRAASMANCCNRSYTC | atch cal Simil 23; (| SULT 1 Sequence 10, Application US/08724194 Patent NO. 5824875 GENERAL INFORMATION: ONE-AMINOCYCLO TITLE OF INVENTION: SYNTHASE GENES TITLE OF INVENTION: SYNTHASE GENES TITLE OF INVENTION: SYNTHASE GENES TITLE OF INVENTION: IN GERANIUMS NUMBER OF SEQUENCES: 13 CORRESPONDENCE ADDRESS: ADDRESSE: 315 WEST OAK STREET; STEET: 315 WEST OAK STREET; STEET: GOT COLLINS COUNTRY: USA ZIP: 80521 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: DEATH PC-DOS/MS-DOS SOFTWARE: DATE: DC-DOS/MS-DOS SOFTWARE: PATENTION DATA: APPLICATION NUMBER: US/08/724,19 FILING DATE: 01-OCT-1996 CLASSIFICATION: 800 ATTORNEY/AGENT INFORMATION: NAME: SANTANGELO, LUKE REGISTRATION NUMBER: 31,997 TELECOMMUNICATION INFORMATION: NAME: SANTANGELO, LUKE REGISTRATION SEQ ID NO: 10: SEQUENCE CHARACTERISTICS: LENGTH: 23 base pairs TYPE: nucleic acid STRANDEDNESS: Sindle TOPOLOGY: Linear FEATURE: NAME/KEY: misc_feature LOCATION: group(3, 5, 6, 15, 18) OTHER INFORMATION: /note- "N rep -08-724-19410 | | | 13.66 13.66 55 55 | ചധവവവ | 400 |
| RAASMA RAASMA | llarity Conserva | 10 Application US/ 824875 ORMATION: ONE INVENTION: ONE INVENTION: ONE INVENTION: ONE INVENTION: SYNI SEQUENCES: 13 DENCE ADDRESS: 20 315 WEST OCK. CO 315 WEST OK FORT COLLINS CO 315 WEST OK FORT COLLINS CO 316 WEST OK FORT COLLINS CO 317 WEST OK FORT COLLINS CO 318: INP PC COMpa NG SYSTEM: PC E: Patentin Rel EPLICATION NUMBER: OC TION SEQ ID NO: CHARACTERISTICS: ATAMACTERISTICS: CHARACTERISTICS: CHARACTERISTICS: CHARACTERISTICS: TOOR ME: MISC_feature Y: misc_feature TY: misc_feature TY: misc_feature | | 4444 | 9.11 | - 4 4 4 4 | 1119 |
| NCCNRS | 66.] 100. tive | llication US/087: 775 775 777 7710N: 7710N: XANUN BALLINDER S NWTION: SYNTHANS: NWTION: SYNTHANS: NWTION: IN GERAI E ADDERSS: SANTANGELO LAW SANTANGELO LAW SOMEST OAK STREE COLLINS 13A 15A 15A 15A 15A 15A 15A 15A 15A 15A 15 | | | 3033 4459 4791 4791 10504 | | |
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| | Score 15.2; Pred. No. 19); Mismatches | 24194 NOCYCLOPROPANE SOFFICES PC ET, STE 701 Le MS-DOS e #1.0, Versio /724,194 7724,194 97 N: : : : : : : : : : : : : : : : : : : | ALIGNMENTS | US-09-423-7 US-09-043-6 US-08-846-8 US-08-846-8 US-08-553-7 | -US95- 09-363 08-949 09-819 09-423 | 09-397 08-453 08-268 08-453 08-199 | 08-484 09-306 09-327 |
| | .5.2; DB NO. 19; natches | FROM PE. 701 Version | ENTS | -744A- -627-1 -826A- -826A- -516-1 | PCT-US95-08071-111 US-09-363-243-2 US-08-949-155-49 US-09-819-964-49 US-09-819-964-49 | -885-6 -695A- -161A- -702A- | -044-10 -881-3 |
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| | Length Indels | ILON US/08724194 RAJINDER S. RAJINDER S. RAJINDER S. RONE-AMINOCYCLOPROPANE-1-CARBOXYLATE SYSTHASE GENES FROM PELARGONIUM TO () RESS: 13 RESS: 13 RESS: 13 RESS: 13 FORM: COMPATION: COMPATION: COT-1996 COCT-1996 LONG JUNE BER: 31,97 INFORMATION: 10 NO: 10: 11 NO: 10: 124-3100 ID NO: 10: 125-125: 131-315 131-316 11 NO: 10: 135-163 15, 16, 15, 18) N: /note- "N represents Inosine" | | (0, (0, (0, (0, (0, (0, (0, (0, (0, (0, | (a (a (a (a (a (a | o to to to to | to to to |
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OTHER INFORMATION: PCR primer US-09-171-482-6
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US-09-171-482-6
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EARLIER APPLICATION NUMBER: PCT/US97/17644, published under WO98/14465; US5,824,875
EARLIER FILING DATE: 1997-Sept-30, Published 1998-April-09; 1996-Oct-01
NUMBER OF SEQ ID NOS: 9
SOFTWARE: Word Perfect 6.1
SEQ ID NO 6
LENGTH: 23
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TITLE OF INVENTION: A 1-AMINOCYCLOPROPANE-1-CARBOXYLATE SYNTHASE GENE FROM
TITLE OF INVENTION: ROSA TO CONTROL ETHYLENE LEVELS IN ROSES
FILE REFERENCE: TAGAWA-ROSE
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LOCATION: 3, 5,
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                                                     APPLICATION NUMBER: AU PI
FILING DATE: 02-MAY-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                               APPLICATION NUMBER: AU P. FILING DATE: 20-SEP-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                       APPLICATION NUMBER: PCT/I
FILING DATE: 20-SEP-1996
PRIOR APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                     CLASSIFICATION: 800 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                   NAME: Bernstein, Scott N
REGISTRATION NUMBER: 38,8
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REFERENCE/DOCKET NUMBER: 3573-11US
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100.0%; Pred. No. 19;
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Best Local :
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TELEFAX: 609-924-3036
INFORMATION FOR SEQ ID NO:
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INFORMATION FOR SEQ ID NO:
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                FEATURE:
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APPLICATION NUMBER: AU PI
APPLICATION 02-MAY-1996
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FILING DATE: 20-MAR-1
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
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LENGTH: 1096 base pairs
TYPE: nucleic acid
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                               MOLECULE TYPE:
                                                                                                                     SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                        NAME: Bernstein, Scott N. REGISTRATION NUMBER: 38,8
                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: AU PN5559 FILING DATE: 20-SEP-1995
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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CITY: Princeton
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Local Similarity 47.8%;
nes 11; Conservation
                                                  TOPOLOGY:
                                                               STRANDEDNESS:
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NAME/KEY: CDS
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US-09-043-627-3/c
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US-09-043-627-5
                                                Query Match
Best Local Similarity 47.8
Matches 11; Conservative
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Best Local Similarity
Matches 11; Conserv
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
1104 base pair
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FILING DATE: 20-SEP-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: AU PN9
FILING DATE: 02-MAY-1996
ATTORNEY/AGENT INFORMATION:
NAME: Bernstein, Scott N.
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CORRESPONDENCE ALDRESS:
ADDRESSEE: MATHRWG
STREFF
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1091 CATACTCTGAAGCACCCCGGCTC 1069
1097 CAGACGCTGAACCAGCCAGGTTC 1075
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REFERENCE/DOCKET NUMBER: 35
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-924-8555
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PRIOR APPLICATION DATA:
APPLICATION UNMBER: PCT/AU96/00591
FILING DATE: 20-SEP-1996
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
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FILING DATE: 20-MA
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7; Mismatches
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                                                Gaps
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FEATURE:
NAME/KEY:
LOCATION:
US-08-378-313-18
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                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                     RESULT 7
US-08-632-598-1/c
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US-08-378-313-18/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 29,959
REFERENCE/DOCKET NUMBER: 2919
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 856-5600
TELEFAX: (415) 494-0792
TELEX: 706141
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 1703 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 18, Application US/08378313
Patent No. 6207881
GENERAL INFORMATION:
APPLICANT: THROLOGIS, ATHANASIOS
APPLICANT: SATO, TAKAHIDO
                                                                                                                                                                                                                  Sequence 1, Application Patent No. 5886164
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PALENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/378,313
FILING DATE:
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/378,313
FILING DATE: US/08/378,313
FILING DATE: 02-APR-1992
ATTORNEY/AGENT INFORMATION:
NAME: MURASHIGE KATE H.
REGISTRATION NUMBER: 29,959
REFERENCE/COCKET NUMBER: 29,959
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                    1 CANANNCKRAASMANCCNRSYTC 23
|| | |::||::| | :::||
1254 CAAACTCGAAACCAACCTGGCTC 1232
                                                                                                                                      APPLICANT: BIRD, COLIN R
APPLICANT: FLETCHER, JONATHON D
TITLE OF INVENTION: RIPENING-RELATED GENES FROM BANANA
NUMBER OF SEQUENCES: 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: CONTROL OF FRUIT RIPENING THROUGH
TITLE OF INVENTION: GENETIC CONTROL OF ACC SYNTHASE SYNTHESIS
NUMBER OF SEQUENCES: 34
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON & FOERSTER
STREET: 755 Page Mill Road
                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                STREET:
COUNTRY: USA
ZIP: 20005-3918
                                      CITY: WASHINGTON STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 755 Page N
CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 47.8 es 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                      1, Application US/08632598
). 5886164
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                                                                            E: CUSHMAN DARBY AND CUSHMAN 1100 NEW YORK AVENUE N.W.
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11..1489
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; Pred. No. 43;
7; Mismatches
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CURRENT APPLICATION DATA:

SOFTWARE:

PatentIn Release #1.0, Version #1.25

COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

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US-09-231-240-1/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: KOKULIS, PAUL N.
REGISTRATION NUMBER: 16,773
REFERENCE/DOCKET NUMBER: 2233
TELECOMMUNICATION INFORMATION:
TELEPHONE: 861-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 822-0944
TELEX: 6714627 CUSH
INFORMATION FOR SEQ ID NO:
NAME: KOKULIS, PAUL N.
ANAME: KOKULIS, PAUL N.
REGISTRATION NUMBER: 16,773
REFERENCE/DOCKET NUMBER: 22:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 861-3000
                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: BIRD, COLIN R
APPLICANT: FLETCHER, JONATHON D
TITLE OF INVENTION: RIPENING-RELATED GENES FROM BANANA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1265 CACACCCTGAACCACCCCGGCTC 1243
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 1712 base pairs
                                                                       ATTORNEY/AGENT INFORMATION: NAME: KOKULIS, PAUL N.
                                                                                                                                            CLASSIFICATION: PRIOR APPLICATION DATA:
                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 1 CANANNCKRAASMANCCNRSYTC 23
                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 47.8 nes 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: MUSA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: sing
                                                                                                           FILING DATE:
                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                FILING DATE
                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                       CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                        STREET:
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                                                                                                                                                                                                                                                                                                                       20005-3918
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47.8%;
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                                         223355/SEE50112/US
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Pred. No. 43;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
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RESULT 10
US-07-809-457A-8/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
US-09-171-482-1/c
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                                                                                                                                                                                                                                                               Sequence 8, Application US/07809457A Patent No. 5512466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 9
SOFTWARE: Word Perfect 6.1
SEQ ID NO 1
LENGTH: 1743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/09171482A Patent No. 6184449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 66.1
Best Local Similarity 47.8
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ranu, Rajinder S.
TITLE OF INVENTION: A 1-AMINOCYCLOPROPANE-1-CARBOXYLATE SYNTHASE GENE FROM
TITLE OF INVENTION: ROSA TO CONTROL ETHYLENE LEVELS IN ROSES
FILE REFERENCE: TAGAWA-ROSE
CURRENT APPLICATION NUMBER: US/09/171,482A
CURRENT FILING DATE: 1998-10-19
EARLIER APPLICATION NUMBER: PCT/US97/17644, Published under W098/14465; US5,824,87
EARLIER FILING DATE: 1997-Sept-30, Published 1998-April-09; 1996-Oct-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: 6714627 CUSH INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                  GENERAL INFORMATION:
ZIP: 63198
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1265 CACACCCTGAACCACCCCGGCTC 1243
                                                                                                                                       NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                         APPLICANT: Klee, Harry J.
APPLICANT: Kishore, Ganesh M.
TITLE OF INVENTION: Control o
TITLE OF INVENTION: in Plants
                                                                                                                                                                                                                                                                                                                                                                         1628 CAAAACCGGAACCATCCCGGTTC 1606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
ORIGINAL SOURCE:
                                    COUNTRY: U
ZIP: 63198
                                                                                     ADDRESSEE: Monsanto Lo. Jones STREET: 700 Chesterfield Village Parkway
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS: single TOPOLOGY: linear
                                                                        STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
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                                                                   Missouri
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                                                      USA
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47.8%;
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47.88;
                                                                                                                                                                         Control of Fruit Ripening and Senescence in Plants
                                                                                                                                                                                                                                                                                                                                                                                                                                            7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7; Mismatches
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Pred. No. 43;
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RESULT 11
US-08-553-943-8/c
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PRIOR APPLICATION DATA:

APPLICATION HUMBER: US 07/632,440

FILING DATE: 26-DEC-1990

ATTORNEY/AGENT LIMFORMATION:

NAME: HOEFIRET JI, Dennis R.

REGISTRATION NUMBER: 30,914

REFERENCE/DOCKET NUMBER: 38-21(1053)

TELECOMMUNICATION INFORMATION:

TELEPAN: (314 537-6047)

INFORMATION FOR SEC ID NO: 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 8, Application US/08553943 Patent No. 5702933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
APPLICATION NUMBER: US/08/553,943
FILING DATE: 06-NOV-1995
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/809,457
FILING DATE: 17-DEC-1991
APPLICATION NUMBER: US 07/632,440
FILING DATE: 26-DEC-1990
ATTORNEY/AGENT INFORMATION:
NAME: HOEYING JT., Dennis R.
REGISTRATION NUMBER: 30,914
REFERENCE/DOCKET NUMBER: 38-21(1058
TELECOMMUNICATION INFORMATION:
TELEPONE: (314)537-6099
TELEPAX: (314)537-6047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: NUCLEIC STRANDEDNESS: TOPOLOGY: lin MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Kiee, Harry J.

APPLICANT: Kishore, Ganesh M.

TITLE OF INVENTION: Control of Fruit Ripening and Senescence TITLE OF INVENTION: in plants
NUMBER OF SEQUENCES: 17

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CANANNCKRŁAŚMANCONRSYTC 23
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1394 CAAACTCGGŁACCACCCTGGCTC 1372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 1800 base pairs
TYPE: NUCLEJC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: INM.PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patientin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: U. ZIP: 63198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
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STREET: 700 Chesterfield Village Parkway
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 47.8 es 11; Corservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              St.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66.1%; Score 15.2; 147.8%; Pred. No. 43; Live 7; Mismatches
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                                                              38-21(10538)A
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RESULT 12
PCT-US91-09437-8/c
; Sequence 8, Application PC/TUS9109437
; GENERAL INFORMATION:
The Harry J.
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RESULT 13
US-08-724-194-3/c
                                                                                                                                                                                  ; MOLECULE TYPE:
PCT-US91-09437-8
                                                                                                                                                                                                                                   APPLICATION NUMBER: PCT/US91/09437
FILING DATE: 19911217
CLASSIFICATION: 800
PRIOR APPLICATION DATA: 800
PRIOR APPLICATION DATA: 800
PILING DATE: 26-DEC-1990
ATTORNEY/AGENT INFORMATION:
NAME: HOETROT INFORMATION:
NAME: HOETROT INFORMATION:
NAME: HOETROT INFORMATION:
TELECOMMUNICATION NUMBER: 30,914
REFERENCE/DOCKET NUMBER: 38-21(10538)
TELECOMMUNICATION INFORMATION:
TELEPIONE: (314)537-6049
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 1800 base pairs
TYPE: NUCLEIC ACID
STRANDENNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
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                                                                                                                        Matches
                                                                                                                                     Query Match
Best Local
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Best Local Similarity 47.8
Matches 11; Conservative
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SEQUENCE CHARACTERISTICS:
LENGTH: 1800 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleace STRANDEDNESS:
TOPOLOGY: line
MOLECULE TYPE:
                                                           1394 CAAACTCGGAACCACCCTGGCTC 1372
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CURRENT APPLICATION DATA:
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STREET: //
CITY: St. Louis
CTATE: Missouri
TSA
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TITLE OF INVENTION: in
NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1394 CAAACTCGGAACCACCCTGGCTC 1372
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Flop
COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                       1 CANANNCKRAASMANCCNRSYTC 23
                                                                                                                                                                                                                TOPOLOGY: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Monsanto Co. BB4F
STREET: 700 Chesterfield Village Parkway
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                                                                                                                     l Similarity 47.
11; Conservative
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3: cDNA to mRNA
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IBM PC compati
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PC-DOS/MS-DOS
                                                                                                                                   66.1%;
47.8%;
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                                                                                                                     Score 15.2;
Pred. No. 43;
7; Mismatches
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Best Local Similarity 4/...
The Best Local Similarity 4/...
Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/08724194 Patent No. 5824875
                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (970) 224-
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NERAL INFORMATION:
APPLICANT: RANU, RAJINDER S.
TITLE OF INVENTION: ONE-AMIN
TITLE OF INVENTION: SYNTHASE
TITLE OF INVENTION: IN GERAN
                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: F10ppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NOTA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1353 CACACTCTAAACCACCCTGGCTC 1331
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LENGTH: 1878 base pairs
TYPE: nucleic acid
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TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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ATTORNEY/AGENT INFORMATION:
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CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                            APPLICANT: STILES, JOHN I.

APPLICANT: NEUPANE, KABI R.

TITLE OF INVENTION: ACC SYNTHASE GENE AND ITS USE IN PLANTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: DNA (genomic)
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                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: FORT COLLINS
STATE: CO
                                                                                                                                                                                                                                             ADDRESSEE: HAVERSTOCK, MEDLEN & CARROLL STREET: 220 MONTGOMERY STREET, SUITE 2200 CITY: SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08 FILING DATE: 01-OCT-1996
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                                     FILING DATE:
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                                                                                                                                                                                                                               CALIFORNIA
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315 WEST OAK STREET, STE 701
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Pred. No. 44;
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US-08-485-107-1
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                                                                                                       US-08-724-194-1
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                                             Matches
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                      TELEPHONE: (970) 224-3100
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: RANU, RAJINDER S.
TITLE OF INVENTION: ONE-AMIN
TITLE OF INVENTION: SYNTHASE
TITLE OF INVENTION: IN GERAN
NUMBER OF SEQUENCES: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1254 CABACCCTGABCCAGCCAGGTTC 1232
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REFERENCE/DOCKET NUMBER: UH
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08
FILING DATE: 01-0CT-1996
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: SANTANGELO, LUKE
                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 1888 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                          REGISTRATION NUMBER: 31,997
TELECOMMUNICATION INFORMATION:
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MOLECULE TYPE:
                                                                                                                     TOPOLOGY: 1
MOLECULE TYPE:
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                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: UZIP: 80521
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                                                           Local
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1 CANANNCKRAASMANCCNRSYTC 23
                                                                                                                                                                               ENGTH:
                                                           Similarity
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315 WEST OAK STREET, STE 701
                                                                                                                                                                               1945 base pairs
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(415) 397-8338
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                                                                                                                     DNA (genomic)
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                                                            66.1%;
47.8%;
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SYNTHASE GENES FROM PELARGONIUM TO CONTROL ETHYLENE LEVELS
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Pred. No. 4
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                                                            Pred. No.
                                                                       Score 15.2;
                                              Mismatches
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| _ | - | _ | | Search completed: March 10, 2003, 06:44:21 Job time: 44 secs | Db 1315 CAAACCCTAFA©CAACCCGGCTC 1293 |
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| | | | | 06:44:21 | 1293 |

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Post-processing: Minimium Match 0%
Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 March 10, 2003, 05:25:27; Search time 50.5 Seconds (without alignments) 304.201 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               478924 segs, 333959956 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-C9-975-842-2
23
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Published_Applications_NA: *
: (cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
(cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
(cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
(cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
(cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
(cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
(cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
(cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
(cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.4_p5_4578 Ccpyright (c) 1993 - 2003 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result | Score | Query Match | Length | DB | ID | Description |
|--------|-------|----------------|--------|----|---------------------|-------------------|
| μ, | 15.4 | 67.0 | 23 | 10 | US-09-776-529A-5 | Sequence 5, Appli |
| c 2 | 15.4 | 67.0 | 748 | 10 | US-09-770-149-16 | 16 |
| ω | 15.4 | 67.0 | 1344 | 9 | US-09-938-842A-1571 | Sequence 1571, Ap |
| c 4 | 14.4 | 62.6 | 274 | 10 | US-09-294-093B-4729 | 4729, |
| 5 | 14.4 | 62.6 | 1506 | 10 | US-09-963-285-9 | Sequence 9, Appli |
| 6 | 14.4 | 62.6 | 2712 | 10 | US-09-963-285-6 | Sequence 6, Appli |
| 7 | | 62.6 | 3289 | 10 | US-09-963-285-8 | Sequence 8, Appli |
| 8 | 14.4 | 62.6 | 4158 | 10 | US-09-963-285-3 | Sequence 3, Appli |
| 9 | 14.4 | 62.6 | 6021 | 10 | US-09-963-285-5 | Sequence 5, Appli |
| 10 | 14.4 | 62.6 | 6458 | 10 | US-09-963-285-1 | Sequence 1, Appli |
| 11 | 14.2 | 61.7 | 536 | 9 | US-09-974-879-57 | Sequence 57, Appl |
| 12 | 14.2 | 61.7 | 1488 | 9 | US-09-938-842A-1726 | Sequence 1726, Ap |
| 13 | 14.2 | 61.7 | 2099 | 10 | US-09-822-830A-14 | Sequence 14, Appl |
| 14 | 14.2 | 61.7 | 2242 | 10 | US-09-954-456-542 | Sequence 542, App |
| 15 | 14.2 | 61.7 | 2274 | 10 | US-09-921-771-5 | Sequence 5, Appli |
| 16 | 14.2 | 61.7 | 14962 | 10 | US-09-764-878-244 | 244 |
| | 14.2 | 61.7 | 15849 | 10 | US-09-880-107-2362 | Sequence 2362, Ap |
| c 18 | 13.8 | 60.0 | 363 | 10 | US-09-864-761-24268 | Sequence 24268, A |
| c 19 | 13.8 | 60.0 | 421 | 9 | US-09-925-299-409 | Seguence 409, App |
| | | | | | | |

| | | | | | | | | | | | | O | c | | | С | O | | | O | c | O | C | C |
|---------------------------------------|-------------------|---------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|-------------------|--------------------|---------------------|-------------------|
| 4 4 5 4 | 4 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | ω | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
| 13.2 | 13.2 | 13.2 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | | ٠ | 13.8 | ٠ | | 13.8 | 13.8 |
| 57.4 | 57.4 | 57.4 | 58.3 | 58.3 | 58.3 | 58.3 | 58.3 | 58.3 | 58.3 | 58.3 | 58.3 | 58.3 | 58.3 | 58.3 | 58.3 | 58.3 | 58.3 | W | | | | | 60.0 | 60.0 |
| 1374 | 1122 | 375 | 172637 | 23632 | 23632 | 23626 | 23626 | 4486 | 4486 | 4485 | 4485 | 2093 | 1985 | 1743 | 813 | 609 | 451 | 308 | 110096 | 22161 | 3015 | 594 | 574 | 421 |
| 9 | ء رد د | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 9 | 12 | 9 | 12 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 10 | 10 | DT |
| US-09-905-1/3-18 US-09-738-626-186 | US-10-060-432-18 | US-09-783-590-10488 | US-09-805-458A-3 | US-09-764-860-941 | US-09-764-878-262 | US-09-764-860-940 | US-09-764-878-261 | US-10-014-269-33 | US-10-002-974-33 | US-10-014-269-1 | US-10-002-974-1 | US-10-044-090-292 | US-09-880-107-3442 | US-09-776-529A-1 | US-09-974-300-293 | US-09-833-381-925 | US-09-876-889-320 | US-09-867-701-3531 | US-09-880-107-1542 | US-09-764-847-1020 | US-10-161-510-6 | US-09-864-761-7563 | US-09-864-761-13696 | US-09-925-299-409 |
| Sequence 186, Appr | Sequence 18, Appl | ַ עו | Sequence 3, Appli | Sequence 941, App | | | 261, | Sequence 33, Appl | Sequence 33, Appl | Sequence 1, Appli | Sequence 1, Appli | Sequence 292, App | Sequence 3442, Ap | Sequence 1, Appli | Sequence 293, App | Sequence 925, App | Sequence 320, App | Sequence 3531, Ap | Sequence 1542, Ap | Sequence 1020, Ap | Sequence 6, Appli | Sequence 7563, Ap | sequence 13696, A | Sequence 409, App |

ALIGNMENTS

RESULT 1 US-09-776-529A-5

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Sequence 5, Application US/09776529A
Patcht No. US200200838481
Patcht No. US200200838481
Patcht No. US200200838481
Patcht No. US200200838681
Patcht No. US200200838681
Patcht No. US200200838681
Patcht No. US20020083881
Patcht No. US20020085
Patcht No. US20020085
Patcht No. US2002008
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Length 1344;

Indels

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Gaps

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; NAME/KEY: misc_feature
; LOCATION: (1)...(748)
; OTHER INFORMATION: n = A,T,C or G
US-09-770-149-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-938-842A-1571
                         SEQ ID NO 157:
                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1571, Application Patent No. US20020160378A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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SEQ ID NO 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL
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                                                            PRIOR APPLICATION NUMBER: US 60/227,866
PRIOR FILING DATE: 2000-08-24
PRIOR APPLICATION NUMBER: US 60/264,647
PRIOR FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: US 60/300,111
PRIOR FILING DATE: 2001-06-22
NUMBER: US 60/300,111
                                                                                                                                                                                           TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING TITLE OF INVENTION: SAME, AND METHODS OF USE FILE REFERENCE: SCRIP1300-3

CURRENT APPLICATION NUMBER: US/09/938,842A

CURRENT FILING DATE: 2001-08-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Hoffman, Neil
APPLICANT: Hurban, Patrick
TITLE OF INVENTION: Expressed Sequences of Arabidopsis
TITLE OF INVENTION: Expressed Sequences of Arabidopsis
FILE REFERENCE: 2024 (PARA-013PRV)
CURRENT APPLICATION NUMBER: US/09/770,149
CURRENT FILING DATE: 2001-01-26
PRIOR APPLICATION NUMBER: 60/178,506
PRIOR APPLICATION NUMBER: 60/178,506
PRIOR FILING DATE: 2000-01-27
NUMBER OF SED ID NOS: 999
                                                                                                                                                                                                                                                                                                     APPLICANT: Harper, Jeff
APPLICANT: Kreps, Joel
APPLICANT: Wang, Xun
APPLICANT: Zhu, Tong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: APPLICANT:
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                                              NUMBER OF SEQ ID NOS: 5379
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               617 GGTCTTCCTGGTTTCCGCGTGGG 595
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           An, Yong-Qiang
Hamilton, Carol M.
Price, Jennifer L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kricker, Maja
Slader, Ted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Davis, Keith R.
Allen, Keith
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ledford, Brooke L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rameaka, Joshua G.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/09938842A
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56.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 15.4;
Pred. No. 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 10;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; NAME/KEY: misc_feature
OTHER INFORMATION: Incyte ID No. US20010051335A1 700354878H1
; NAME/KEY: unsure
; LOCATION: 146, 203, 223
; OTHER INFORMATION: a, t, c, g, or other
US-09-294-093B-4729
                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-963-285-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 13; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Arabidopsis thaliana US-09-938-842A-1571
                                                                                                                                                                                                                                                                                                                                                                                                             ; Sequence 9, Application US/09963285
; Patent No. US20020090707A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE:
SEQ ID NO 4729
LENGTH: 274
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-294-093B-4729/c
                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 62.6%;
Best Local Similarity 54.5%;
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4729, Application US/09294093B Patent No. US20010051335A1
                       SEQ ID NO 9
                                                                                                                            CURRENT APPLICATION NUMBER: US/09/963,285
CURRENT FILING DATE: 2001-09-26
PRIOR APPLICATION NUMBER: SE 0004102-0
PRIOR ETLING DATE: 2000-11-09
PRIOR APPLICATION NUMBER: US 60/238,897
PRIOR FILING DATE: 2000-10-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/294,093B
CURRENT FILING DATE: 1999-04-16
PRIOR APPLICATION NUMBER: 60/082,567
PRIOR FILING DATE: April 21, 1998
NUMBER OF SEQ ID NOS:
COMMENT OF SEQ ID NOS:
                                                              PRIOR APPLICATION NUMBER: SE 0003435-5
PRIOR FILING DATE: 2000-09-26
NUMBER OF SEQ ID NOS: 24
                                                                                                                                                                                                                                                            TITLE OF INVENTION: PROMOTER SEQUENCES FILE REFERENCE: 13425-042001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Shezman, Bradley, K.
TITLE OF INVENTION: POLYMUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN TASSELFILE REFERENCE: PL-0009 US
                                           SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Enerbck, Sven
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LENGTH: 1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          862 GGTCTTCCTGGTTTCCGCGTGGG 884
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                                                                                                                                                                                                                                                                                                       Wasserman,
                                                                                                                                                                                                                                                                                                                            Rondahl, Lena
                                                                                                                                                                                                                                                                                                                                                 Krook, Katarina
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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                                                                                                                                                                                                                                                                                                          Wyeth
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56.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 15.4;
Pred. No. 44;
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Pred. No. 1.2e+02;
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Length 274; Indels

0

Gaps .

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29

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; TYPE: DNA
; ORGANISM: Homo & aplens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)...(1503)
US-09-963-285-9
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CURRENT APPLICATION NUMBER: US/09/963,285
CURRENT FILING DATE: 2001-09-26
PRIOR APPLICATION NUMBER: SE 0004102-0
PRIOR FILING DATE: 2000-11-09
PRIOR APPLICATION NUMBER: US 60/238,897
PRIOR APPLICATION NUMBER: US 60/238,897
PRIOR APPLICATION NUMBER: SE 0003435-5
PRIOR APPLICATION NUMBER: SE 0003435-5
PRIOR FILING DATE: 2000-09-26
NUMBER OF SEQ ID NOS: 24
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 6
         APPLICANT: Enerbel, Sven
APPLICANT: Krook, Katarina
APPLICANT: Krook, Katarina
APPLICANT: Rondalil, Lena
APPLICANT: Wasserman, Wyeth
TITLE OF INVENTIOH: PROMOTER SEQUENCES
FILE REFERENCE: 1:425-042001
CURRENT APPLICATION NUMBER: US/09/963,285
CURRENT FILING DAYE: 2001-09-26
PRIOR APPLICATION NUMBER: SE 0004102-0
PRIOR APPLICATION NUMBER: US 60/238,897
PRIOR APPLICATION NUMBER: US 60/238,897
PRIOR FILING DATE: 2000-10-10
PRIOR FILING DATE: 2000-10-10
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; LOCATION: (422)...(1903)
US-09-963-285-6
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                                                                                                                                                                                                                                                                   Sequence 8, Application US/09963285 Patent No. US2002009D707A1 GENERAL INFORMATION:
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Best Local Similarity 54.5
Matches 12; Conservative
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APPLICANT: Enerbck, Katarina
APPLICANT: Krook, Katarina
APPLICANT: Rondahl, Lena
APPLICANT: Wasserman, Wyeth
TITLE OF INVENTION: PROMOTER SEQUENCES
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Pattent No. US20020090707A1
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Best Local Similarity 54.5%;
Matches 12; Corservative
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PRIOR APPLICATION NÚMBER: SE 0003435-5
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                                                                                                                                                                                                                                                                                                                                                                                                            1 GGNYTNCCNG:NTTYMGNRTNG 22
|| :| || || || ::| :| |
1214 GGGCTGCCCGGC[TTCAGCGTGG 123
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54.5%;
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4; Mismatches
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Pred. No. 1.5e+02;
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RESULT 9
US-09-63-285-5
; Sequence 5, Application US/09963285
; Sequence 0, Application US/09963285
; Patent No. US20020090707A1
; GENERAL INFORMATION:
APPLICANT: EMERICA, Sven
APPLICANT: Krook, Katarina
APPLICANT: Krook, Katarina
APPLICANT: Rondahl, Lena
APPLICANT: Wasserman, Wyeth
TITLE OF INVENTION: PROMOTER SEQUENCES
FILE REBEREBNC: 13425-042001
CURRENT APPLICATION NUMBER: US/09/963,285
CURRENT FILING DATE: 2001-09-26
PRIOR APPLICATION NUMBER: SE 0004102-0
PRIOR APPLICATION NUMBER: US 60/238,897
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; NAME/KEY: CDS
; LOCATION: (187)...(1437)
US-09-963-285-3
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US-09-963-285-3
US-09-963-285-3
; Sequence 3, Application US/09963285
; Patent No. US20020090707A1
; GENERAL INFORMATION:
APPLICANT: Enerbek, Sven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Wasserman, Wyeth
TITLE OF INVENTION: PROMOTER SEQUENCES
FILE REFERENCE: 13425-042001
CURRENT APPLICATION NUMBER: US/99/963,285
CURRENT APPLICATION NUMBER: SE 0004102-0
PRIOR APPLICATION NUMBER: SE 0004102-0
PRIOR APPLICATION NUMBER: O60/238,897
PRIOR APPLICATION NUMBER: US 60/238,897
PRIOR FILING DATE: 2000-10-10
PRIOR FILING DATE: 2000-09-26
PRIOR APPLICATION NUMBER: SE 0003435-5
PRIOR FILING DATE: 2000-09-26
NUMBER OF SEQ ID NOS: 24
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; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-963-285-8
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SEQ ID NO 3
LENGTH: 4158
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Best Local Similarity 54.5
Matches 12; Conservative
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Best Local Similarity 54.5
Matches 12; Conservative
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NUMBER OF SEQ ID NOS: 24
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 8
LENGTH: 3289
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ORGANISM: Homo sapiens
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|730 GGGCTGCCTGGCTTCAGCGTGG 751
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11, Lena
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Pred. No. 1.7e+02;
4; Mismatches 6
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Pred. No. 1
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; NAME/KEY: exon
; LOCATION: (1649)...(438)
US-09-963-285-5
             US-09-974-879-57
Sequence 57, Application US/09974879
Publication No. US20030028003A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TIFLE OF INVENTION: 125 Human Secreted Proteins
FILE REFERENCE: PZ020P2
CURRENT APPLICATION NUMBER: US/09/974,879
CURRENT FILING DATE: 2001-10-12
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; LOCATION: (2235)...(3737)
US-09-963-285-1
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Matches 12; Conserv
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Best Local
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Best Local :
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APPLICANT:
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PRIOR APPLICATION NUMBER: SE 0003435-5
PRIOR FILING DATE: 2000-09-26
NUMBER OF SEO ID NOS: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/963,285
CURRENT FILING DATE: 2001-09-26
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PRIOR APPLICATION NUMBER: US 60/239,893
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                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 6458
TYPE: DNA
ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                                                                                       Local Similarity
les 12; Conserv
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Wasserman, Wyeth
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54.5%;
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54.5%;
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Pred. No. 1.8e+02;
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Pred. No. 1
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6;
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; FEATURE:
, NAME/KEY: SITE
; LOCATION: (536)
; OTHER INFORMATION: n equals a,t,g,
US-09-974-879-57
APPLICANT: Harper, Jeff
APPLICANT: Kreps, Joel
APPLICANT: Wang, Xun
APPLICANT: Wang, Xun
APPLICANT: Dang, Xun
APPLICANT: AND TITLE OF INVENTION: STRESS-REGULATED GENES OF PLA
TITLE OF INVENTION: SAME, AND METHODS OF USE
FILE REFERENCE: SCRIPI300-3
CURRENT APPLICATION NUMBER: US/09/938,842A
CURRENT FILING DATE: 2001-08-24
PRIOR APPLICATION NUMBER: US 60/227,866
PRIOR APPLICATION NUMBER: US 60/264,647
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                                                                                                                                                                                                                                                   Sequence 1726, Application Patent No. US20020160378A1
                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 13; Conserv
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APPLICATION NUMBER: US 09/818,683
FILING DATE: 2001-03-28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: PCT/US98/23435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US (FILING DATE: 1997-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 60/066,089 FILING DATE: 1997-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 60/066,100 FILING DATE: 1997-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 60/066,094 FILING DATE: 1997-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 60/064,985 FILING DATE: 1997-11-07
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                                                                                                                                                                                                                                                                         US/09938842A
                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 14.2; DB 9;
Pred. No. 1.7e+02;
3; Mismatches 7;
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                                                                                                                                       PLANTS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 536;
                                                                                                                                           TRANSGENIC PLANTS CONTAINING
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RESULT 14
US-09-954-456-542
; Sequence 542, Application US/09954456
; Patent No. US2002011957A1
GENERAL INFORMATION:
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US-09-822-830A-14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn /er. 2.0
SEQ ID NO 14
LENGTH: 209
TYPE: DNA
ORGANISM: Homo st.p.ens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL
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Patent No. US20020142952A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NØS: 5379
SEQ ID NO 1726
LENGTH: 1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Genetics Institute, Inc.
APPLICANT: Wong, Gordon G.
APPLICANT: Clark. Hilary
APPLICANT: Fechtel, Kim
APPLICANT: Agostinp, Michael J.
APPLICANT: Howes. Steven H.
APPLICANT: Gulukoth, Kamalakar
APPLICANT: Grahan, James R.
APPLICANT: Grahan, James R.
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING NOVEL SECRETED PROTEINS
TITLE REFERENCE: G.N 6402
CURRENT APPLICATION NUMBER: US/09/822,830A
CURRENT FILING DAME: 2001-03-29
APPLICANT: Young, Paul
TITLE OF INVENTION: Process for Identifying Anti-Cancer Therapeutic Agents Using Canc
TITLE OF INVENTION: Sets
TITLE OF INVENTION: Sets
FILE REFERENCE: 68929-76
CURRENT APPLICATION NUMBER: US/09/954,456
CURRENT FILING DATE: 2001-09-18
PRIOR APPLICATION NUMBER: US/60/233,617
PRIOR FILING DATE: 2000-09-18
PRIOR PILING DATE: 2000-09-18
PRIOR PILING DATE: 2000-09-20
PRIOR FILING DATE: US/60/234,923
PRIOR FILING DATE: US/60/294,923
PRIOR FILING DATE: 2000-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT FILING DAME: 2001-03-29
PRIOR APPLICATION NUMBER: 60/195,604
PRIOR FILING DATE 2000-04-06
NUMBER OF SEQ ID HOS: 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: US 60/300,111
PRIOR FILING DATE: 2001-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Arabicopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                     1639 GGGTTTCCAG&CTTGAGAGTGGG 1661
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56.5%; Pred. No. ...
+ive 3; Mismatches
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Pred. No. 1.9e+02;
Pred. No. 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 10; Length 2099;
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RESULT 15
US-09-921-771-5
US-09-921-771-5
Sequence 5, Application US/09921771
Patent NO. US20020081284A1
Patent NO. US20020081284A1
GENERAL INFORMATION: Manipulation of Arterial-Venous Identity TITLE OF INVENTION: Manipulation of Arterial-Venous Identity FILE REFERENCE: 10402-011
CURRENT APPLICATION UMMBER: US/09/921,771
CURRENT FILING DATE: 2001-08-03
NUMBER OF SEQ ID NOS: 6
SEQ ID NO 5
SEQ ID NO 5
SEQ ID NO 5
SEQ ID NO 5
SEQ ID NO 6
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PRIOR PILING DATE: 2000-09-25
PRIOR PPLICATION NUMBER: US/60/235,637
PRIOR FILING DATE: 2000-09-26
PRIOR FILING DATE: 2000-09-26
PRIOR APPLICATION NUMBER: US/60/235,638
PRIOR FILING DATE: 2000-09-27
PRIOR PPLICATION NUMBER: US/60/235,711
PRIOR PPLICATION NUMBER: US/60/235,720
PRIOR APPLICATION NUMBER: US/60/235,720
PRIOR PPLICATION NUMBER: US/60/235,840
PRIOR PPLICATION NUMBER: US/60/235,840
PRIOR APPLICATION NUMBER: US/60/235,863
PRIOR APPLICATION NUMBER: US/60/235,863
PRIOR PILING DATE: 2000-09-27
PRIOR PILING DATE: 2000-09-27
NUMBER OF SEQ ID NOS: 2276
SCOTTABRE: Datation VASION 3 0
Job time : 63.5 secs
                                         Search completed: March 10, 2003, 06:46:24
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SEQ ID NO 542
LENGTH: 2242
TYPE: DNA
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Best Local S
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les 13; Conservative
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Pred. No. 2
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